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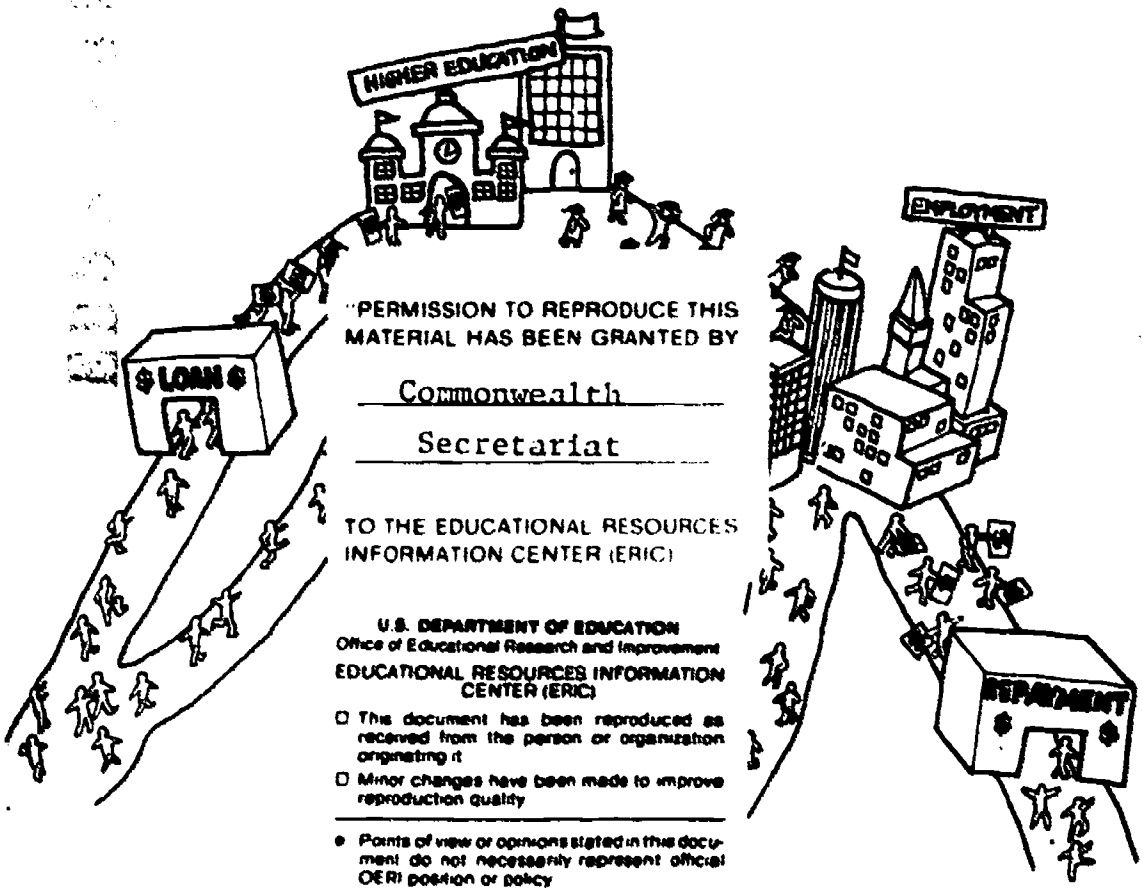
ABSTRACT

This book presents information from the Commonwealth Ministers of Education's Ninth Conference in Nicosia, held in Cyprus in 1984, that addressed strategies to (1) increase resources for the development of education in developing countries, and (2) make better use of existing resources for educational needs. The book's main intent is to present some of the practical issues and choices that any authority contemplating setting up a student loan program must face, and to bring to the attention of policy makers the experience of student loan schemes already operating. Chapter 1 discusses the case for introducing student loan programs. Chapter 2 covers policy choices and contains discussions on policy decisions in designing a student loan programs including 10 crucial decisions and the advantages and disadvantages of different models. Chapter 3 shows how a computer model can be developed to examine the implications of alternative choices. Chapter 4 provides more details of actual experience, including experiences from both developed and developing countries and particularly highlighting activities in Colombia, Barbados, and Hong Kong as case studies of countries which have established student loan programs. Contains an 18-item bibliography. (GLR)

Lending for Learning:

Designing A Student Loan Programme for Developing Countries



Maureen Woodhall

Commonwealth Secretariat

Lending for Learning:

Designing a Student Loan Programme for Developing Countries

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Foreword

The shortage of resources for educational development is a recurring theme in the history of public education systems. Some countries have enjoyed brief periods of their history when they have been relatively free from such pressures. However, such respites have generally been short-lived, and the majority of countries have had to live with financial constraints preventing them from expanding educational services as rapidly and as extensively as they would wish. Particularly difficult economic conditions in the late 1970s and early 1980s forced governments to pay closer attention than usual to issues arising from inadequate resources. Many countries suffered from the general world-wide economic recession, high inflation, increasing international debt, and drought conditions in some regions. At the same time the effects of earlier expansion of intakes at the lower levels of education have worked their way through the education systems so that today the resource requirements stemming from developments initiated in earlier years, are greater than ever.

Commonwealth Ministers of Education directed their attention to these issues at their Ninth Conference in Nicosia, Cyprus in July 1984. In their communiqué they noted that 'education authorities throughout the Commonwealth were under severe pressure as the recession cut into their budgets and faced acute difficulties in their efforts to raise standards and extend education to growing numbers'. They therefore examined strategies (a) to increase resources for the development of education and (b) to make better use of existing resources, and directed the Commonwealth Secretariat to identify critical resource gaps and methods by which these gaps might be bridged. The Nicosia Conference recommendations also called upon Commonwealth governments and the Secretariat to undertake action that would inform member countries of the range of tested innovations.

The present study has been commissioned in response to those

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recommendations, and is one of a range of activities. The major thrust of the programme has been a series of three workshops on 'resources for education and their cost-effective use'. The first of them, held in Botswana in June 1985, discussed community management and financing of schools in less developed countries. It was largely about mobilising alternative sources of funds and commitment within the community. The second and third workshops concentrated more on the cost-effective use of resources, though financing issues, like the capacity of education institutions to generate income for themselves, were also raised. The second workshop was held in Trinidad in June 1986 and discussed the cost-effective provision of practical subjects in the curriculum at secondary level. The third workshop, held in New Zealand in November 1986, focused mainly on the Pacific area and considered ways of operating small schools in a cost-effective manner. Resource books based on each of the three workshops are being published in the same series as this present report.

In inviting Maureen Woodhall to write this study, the Commonwealth Secretariat is not adopting any stance on whether or not student loans are an appropriate mechanism for financing education in any particular member country. It is certainly not aligning itself with the argument of those who passionately advocate loans, which they often link to the desirability of introducing fees or 'user-charges' for education, as a way of financing education in preference to the alternative of 'free' education. But nor, on the other hand, can it be argued that 'lending for learning' should be excluded from consideration as one among other options. Whilst it would be naive to ignore the reality that in many situations the strongest supporters of student loans have been those who want to do away with free education, loans themselves are a politically neutral mechanism for financing education. Thus governments of many Commonwealth developing countries borrow money from the World Bank or regional development banks to finance their long-term educational development. In some countries the local education authorities rely on loans for school construction. Others, such as community groups or private schools, may also borrow money to erect facilities. A great deal of private schooling is financed by parental

borrowing. In many countries of the Commonwealth students and their parents are accustomed to having to meet some of the direct and indirect costs of secondary and higher education, and may well borrow funds from friends or the banking system for accommodation and living costs, intending to repay these loans later out of future income. Public loan systems may well help these individuals to borrow more cheaply than is possible on the open commercial market.

The present study does not set out to argue the case for or against student loans. These arguments and many of the issues of efficiency, equity, equality of opportunity etc. have been discussed more fully in other publications, such as the one Maureen Woodhall herself has written for the World Bank under the title *Student loans as a means of financing higher education*. At the same time the study does stress the point that any government considering introduction of a student loan programme should first be clear in its own mind about what it hopes to achieve. Is the intention to assist needy students who cannot meet their existing obligations? Is it to be linked with the imposition of fees and charges for tuition or other services that students presently receive free? Are loans to be used for manpower direction purposes?

The main intention of this study is to set out in a convenient form some of the practical issues and choices that any authority contemplating setting up a student loan programme would have to face, and to bring to the attention of policy makers the experience with student loan schemes already operating. Inevitably much of the international experience cited is drawn from more developed countries, but Maureen Woodhall has taken special pains to collect data from developing countries wherever she has been able to find it. The result is a useful checklist of considerations, decisions and options which must be addressed by any government setting up a student loan scheme.

We very much hope that this study will prove useful to policy makers and practitioners, and will be glad to receive comments from readers on whether it achieves this purpose. I would particularly like to express our gratitude to Maureen Woodhall herself as the author, to all those who assisted her with case study and other material, and particularly to Dwight Horch of

Educational Testing Service and to John Fielden, John Webb and Sue Brownlow of Peat Marwick for their help in developing computer models of a student loan programme.

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If you or anyone you know, would like a copy of this book, or the others listed on the back cover, the Commonwealth Secretariat can provide limited numbers free of charge to people and organisations in developing countries.

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Maureen Woodhall
January, 1987

Introduction

Chapter 1: The Case for Introducing Student Loans

Throughout the world, education systems are facing increasing financial constraints. Some governments are opting to reduce public expenditure as a vital element in their long-term economic strategies. Others are being forced to reduce spending by medium or short term factors, particularly the world recession and the collapse of the price of oil and other primary products, which has caused a sharp fall in revenue in many countries.

The pressure of increasing demand for education, however, continues unabated. Some of this is due to demographic trends, particularly in developing countries, where the growth in school and college age population is substantial. Equally important is the rising private demand for education. As more and more young people and their parents see secondary or higher education as the key to secure, well-paid jobs in the modern sector, an increasing proportion of the age group aspires to higher education. Evidence on the social and private returns to education suggests that education is still a profitable investment both for individual students and for society as a whole. But government budgets face severe financial constraints. Public expenditure on education already absorbs 15 to 20 per cent of total government expenditure in many developing countries, and cannot keep pace with rising demand for more or better quality education.

Financial Constraints Confronting Higher Education

In many developing countries governments are particularly concerned to reduce the costs of higher education. Costs per

student in universities and colleges are high in relation to other levels of education. In developed countries on the whole, one university student costs the government as much per year as three or four primary school pupils. But in Asia one student in higher education costs as much as ten or fifteen primary school pupils per year. In many African countries a whole class of thirty or forty children could receive a year's schooling for the annual cost of a single student at the university level, and in some developing countries one university student costs more than 100 primary school pupils.

There are many reasons why higher education is so costly in relation to lower levels of education in developing countries. Low student-teacher ratios and the small size of some universities or colleges means that economies of scale cannot be exploited; the costs of equipment, particularly for science or engineering, are high, as are the costs of libraries and other specialized facilities. In some countries the need to recruit expatriate teachers to overcome domestic shortages of highly skilled manpower and the need to import books, materials or equipment from overseas both push up costs. Another cause of high costs is the fact that universities are often modelled on the residential campus common in Europe or North America.

The share of higher education costs borne by the government is often very high. Many countries do not charge tuition fees for higher education, or, if fees are charged, they are fixed so low that the extent of cost recovery is minimal. Not only do students pay very low fees, but in many developing countries students also receive free board and lodging, and even 'pocket money' in some cases.

The cost of scholarships and bursaries for living expenses is sometimes dramatic: in some parts of Africa, for example Burkina Faso, Cameroon, or the Ivory Coast, students' living allowances represent over 40 per cent of the entire government budget for higher education.

A New Look at Patterns of Subsidising Higher Education

Many economists have questioned whether such high subsidies are either efficient or equitable. Governments subsidise higher

education for many reasons. Social and political pressures are important, as well as economic justifications, which include:

* ensuring an adequate supply of skilled manpower for the economy,
* preventing underinvestment in education, since the social benefits of having a skilled and adaptable labour force exceed the private financial benefits to the individual,
* providing equality of opportunity for all citizens, regardless of wealth, to ensure that students from low-income families are not prevented from participating in higher education by inability to pay fees or finance living expenses.

In many cases the decision to provide free university education, and to give scholarships, bursaries or grants towards students' living expenses dates from a period when newly independent countries faced serious shortages of skilled and professional manpower. The need to overcome these shortages in order to achieve economic growth and replace expatriates by trained nationals meant that rapid expansion of higher education was given top priority. It was considered imperative that no talented student should be discouraged from pursuing higher education because of inability to pay tuition fees or maintenance costs.

A policy of free tuition and generous scholarships was also justified on grounds of equity. The desire for social justice and equality of opportunity made it vitally important that the new colleges and universities being built should not recruit exclusively from among wealthy families who could afford to pay fees and support their sons or daughters during many years of study.

More recently it has been argued that the twin goals of efficiency and equity are not well served by these policies, which result in very high levels of subsidy for higher education. If judged purely by the criteria of cost-benefit analysis, this may not be the best use of scarce public funds. Evidence suggests that in many developing countries, expenditure on basic education at the primary level is more profitable, and offers a higher rate of return than education at the university level (Psacharopoulos 1985). Shortages of skilled manpower which gave rise to high levels of subsidy in the first place

have in many cases given way to surpluses and graduate unemployment.

There is also evidence that despite low or non-existent tuition fees, and generous scholarships and bursaries, it is still the children of the wealthy who are most likely to gain access to higher education and to be the chief beneficiaries of higher education subsidies. Low income pupils are often deterred from continuing secondary education, and so cannot gain the school-leaving qualifications necessary for university entry, and students from upper income families are more likely to attend high quality secondary schools or can afford to pay for private tuition to supplement low quality schooling. For a variety of reasons it is the rich, rather than the poor, who are most likely to benefit from highly subsidised universities and colleges of higher education.

Several governments have therefore proposed to move towards greater cost recovery in higher education, by introducing or increasing fees, while at the same time providing financial support for students to ensure that fees do not deter talented students from low income families. Policies of cost recovery may mean introducing or raising tuition fees or, in countries where students have traditionally enjoyed free lodging, the introduction of realistic charges for meals and accommodation.

Recently, such proposals have been given added impetus, not only by the growing financial constraints facing many governments, but also by the recommendations of the World Bank. A number of recent publications of the World Bank (for example, Psacharopoulos and Woodhall 1985) have argued for a shift in the balance between private and public funding for higher education, on the grounds that present policies of subsidising higher education mean that too much is spent on higher education in relation to lower levels, that present patterns of subsidy are inequitable since the children of 'white collar' workers and professionals enjoy a far greater share of public resources for education than the children of manual workers or farmers and agricultural workers, and it is the children of relatively wealthy families who are most likely to benefit from higher education.

The World Bank's recent paper on financing education (1986) has come down strongly in favour of a strategy of cost recovery involving:

- introducing or raising tuition fees in higher education
- charging students for board and lodging
- replacing scholarships and bursaries by student loans
- reallocating the revenue generated by these changes, in order to expand or improve the quality of primary education.

There are many politicians who remain unconvinced by such arguments, and who recognise all too clearly the difficulties of reducing subsidies which favour one of the most articulate and vocal groups in society.

Nevertheless, financial constraints are causing governments in many countries to reassess and modify their policies of financing higher education. In some cases this represents part of a strategy of shifting more of the financial burden of higher education from the taxpayer to those who will directly benefit from better employment opportunities and higher lifetime earnings. In other cases it is due simply to a desire to seek new sources of finance, in order to allow expansion for improvements in the quality of education.

One of the options being considered in several countries is the introduction of student loans, either to replace scholarships or bursaries, or to enable students to pay higher tuition fees or charges for accommodation. Some countries which already have loan programmes are considering expanding their existing schemes, in order to soften the impact of fee increases. Some governments see students loans as a way of expanding higher education without imposing excessive financial burdens on the public exchequer. For a variety of reasons, therefore, a number of governments have recently re-examined the case for student loans, and have turned to international experience for guidance.

International Experience with Student Loans

Student loans are already widely used as a means of financing higher education in both developed and developing countries. Government sponsored or guaranteed student loan programmes now exist in well over thirty countries, to enable students to borrow to finance tuition fees or living expenses. There is even one example of student loans in a Communist country: China has recently announced that in future only very low income students will receive

stipends. The remainder will receive loans. Some countries also have a number of private loan programmes, set up by religious or charitable organisations or by private universities.

There is nothing new in the idea of students borrowing money to finance education or training. Informal arrangements have always existed whereby young men or women financed their higher education by borrowing from a wealthy patron or relative in the expectation that high earnings in the future would enable them to repay the loan. Students in many countries borrow from relatives or friends, and even in the poorest countries the extended family will try to find money to finance one child's education, in the expectation that he or she will later finance schooling or higher education for younger relatives.

A fortunate few may therefore have access to informal loans, to enable them to invest in education to enhance their future earning capacity. For the vast majority, however, the only possibility of borrowing, except at very high rates of interest, is a scheme by which the government or banks provide educational loans on favourable terms. The reasons are simple: students need loans for a relatively long period, and the possibility of unemployment, illness or death means that there is a high degree of risk for the lender unless the loan is backed by some firm guarantee.

Banks are usually willing to provide commercial loans only to borrowers who can demonstrate their ability to repay the loan by assigning to the bank an asset, such as the deeds of property or land, or an insurance policy, which represent 'collateral', that is security for the bank that the loan will be repaid or, in the event of default, the asset can be sold. Since students rarely have assets which can be offered in this way, commercial banks may require a personal guarantee from a parent or relative who undertakes to repay the loan if the student defaults.

Governments in many countries have therefore established loan programmes, either financed from public funds, or backed by a government guarantee. The first official loan programmes — as opposed to private charitable or philanthropic ventures — were set up in Denmark, Sweden, the USA and Colombia in the 1950's. These were followed by an increasing number of government sponsored or guaranteed loan programmes for students in higher education, in the 1960's and 70's.

International experience shows that loans are feasible. Goverment-financed loan programmes are working in many developed and developing countries (Woodhall 1983). Nevertheless, opponents of loans still argue that the costs, the dangers and the administrative problems would outweigh the advantages of introducing loans, and proposals to introduce loans still rouse considerable controversy.

Proposals to Introduce Student Loans

In Britain, for more than twenty years some writers have recommended the introduction of student loans, and in 1986 the government announced a review of student aid policy which will re-examine the option of loans. The arguments put forward both for and against student loans in Britain have also been echoed in other countries where systems of student support are under review.

Advocates of loans argue that a system of student support based partially or entirely on loans is more efficient and equitable than a system relying wholly on grants.

The advantages claimed for loans include:

(a) a reduction, in the long run, in the costs of subsidising students, thus allowing the government to expand higher education, to reallocate the savings to other levels of education, or to reduce the financial burden on the taxpayer;
(b) less transfer of income from low-income taxpayers to those who are likely to enjoy higher than average incomes in the future;
(c) improved motivation of students, who would become more cost-conscious and more thoughtful about future career prospects;
(d) greater flexibility than a system which gives grants to certain categories of student and denies any form of financial aid to others, such as part-time students or students in private universities.

On the other hand, the critics of student loans continue to draw attention to potential problems. For example, in Britain, the National Union of Students, which has long opposed the intro-

duction of loans, even on a partial basis, produced a strongly worded attack in 1985 which concluded that "none of the systems observed meet the needs of students, education, government or the country concerned" (NUS 1985). Critics of loans argue that replacing grants by loans would:

(a) discourage low-income students from participating in higher education, because of their fear of incurring future debts;
(b) provide a particular disincentive for women, who would face a 'negative dowry' if they married while still having unpaid debts;
(c) be difficult and costly to administer, particularly at the repayment stage;
(d) lead to little or no savings of public funds, because of the danger of default.

Despite the controversy surrounding student loans, there have been recent proposals to introduce loans in many countries, including Australia, New Zealand, Ghana, Kenya, Nigeria, the Ivory Coast, Malaysia, and Papua New Guinea. In addition some countries, such as Barbados and Indonesia, where loan programmes were introduced in the 1970's or early 1980's, have recently considered expanding the existing system of loans.

The Need for Practical Advice: The Purpose of this Book

Despite the renewed interest in loans as a means of financing higher education, and the frequent proposals in various countries to introduce or expand loans for students, there is very little practical advice available for the policy maker who is actively considering establishing a loan programme. As more governments consider introducing loans as a way of overcoming financial constraints, it becomes increasingly clear that what is needed is not further theoretical debate about the advantages and disadvantages of loans, but practical information about existing programmes, their strengths and weaknesses, and about the range of options available to a policy maker who is considering introducing a student loan programme. With more than thirty countries providing student

Proposal for a National Student Loan Bank in Malaysia

A recent examination of the Malaysian government scholarship policy concluded that the system of scholarships was:

- *generating a mismatch between the supply and demand for high level manpower*
- *highly regressive, and chiefly benefitted students from wealthier families.*

The authors recommend the establishment of a National Student Loan Bank, to provide repayable loans to all students, both for overseas and local university study. "Even poor students will, thanks to their education, ultimately emerge as relatively rich members of society and, therefore, they should be expected to discharge their social accountability to the next generation by repaying their loans." (Mehmet and Hoong 1985, p. 208)

loans, and with several countries offering more than one type of loan, there is a bewildering variety of models and an even greater multiplicity of variables to consider in designing a loan programme. The purpose of this book, therefore, is to examine the range of choices facing the policy maker who has been convinced of the merits of establishing some sort of loan programme but is unsure of the advantages or disadvantages of different types of loan scheme.

The emphasis is on practical choices rather than on the theoretical case for introducing loans. The book is written to provide practical assistance for a policy maker who is willing to embark on the process of establishing a loan programme, perhaps initially only on an experimental basis, but is unsure what prior decisions and choices have to be made before a loan programme can be set up. The focus is mainly on the possibilities for establishing a loan programme in a developing country. For this reason, particular attention is given to the problems faced by

national policy makers in developing countries, who are likely to see the main advantages of student loans in terms of a reduction in the public costs of higher education.

There are of course other issues that must be considered, including the impact of student loans on patterns of participation in higher education, on student choices and motivation, and on educational institutions. Many of these issues are also of particular concern at the moment in several developed countries where student loans are currently under scrutiny, for example the USA and Sweden, or countries which are considering introducing loans, for example Britain. However, this book is addressed primarily to the policy maker or administrator in a developing country; and though it draws on the experience of loan programmes in developed countries, including the USA, Japan, Canada, Sweden and West Germany, it is mainly concerned with the lessons of such experience for developing countries, and with experience of actual loan programmes in developing countries.

The remainder of the book is divided into two parts. The first part deals with policy choices. Chapter 2 considers the choices facing the policy maker, in terms of ten crucial decisions that have to be made, and the evidence that is available on the advantages and disadvantages of different models. Chapter 3 shows how a computer model can be developed to examine the implications of alternative choices. Part II provides more details of actual experience. Chapter 4 summarises experience in both developed and developing countries, and provides more detailed information on Colombia, Barbados and Hong Kong, as case studies of countries which have established student loan programmes.

There is no single 'ideal model' put forward in this book, for the simple reason that the choice between alternatives must depend in part on the conditions within the country, including the existing pattern of finance for higher education, and factors such as the size of a country and its state of development. Above all, it must depend on national objectives and priorities, and the specific aims of the policy maker in introducing student loans. In some countries, the aim of a loan programme may be to expand financial aid for students, which will lead to increases in expenditure; in other cases the aim is to reduce the level of public subsidy and

substitute loans for grants, scholarships or bursaries, or increase cost recovery through fees.

Some of the choices facing the policy maker in designing a student loan programme are political. For example:

* how should the costs of higher education be shared between students, their families and the taxpayer?
* should loans be available to students in private as well as public universities?

Other choices are more technical:

* what should be the repayment terms of student loans?
* what steps should be taken to minimise default?

This book examines both types of choices, and shows how different decisions have been made in different countries.

However, what will work in one situation will not necessarily work in another country facing different economic and political conditions. Therefore, rather than providing a 'blue-print' for a student loan programme, the book aims to provide the policy maker with a framework for examining some of the implications of alternative choices. It is hoped that this will prove useful, if only as a 'check list' of problems to be solved before a student loan programme can be established.

Part I: Policy Choices

Chapter 2: Policy Decisions in Designing a Student Loan Programme

A policy maker who favours the idea of student loans, but is still at the stage of designing a loan programme, faces a number of policy decisions. First and foremost, there are political decisions:

What is the aim of the loan programme? Student loans may be introduced as a way of increasing opportunities for access to higher education, by providing subsidies, or as a way of generating extra resources for higher education by increasing cost recovery.

The objectives of student aid programmes should be clear and explicit. It will be impossible to monitor the effectiveness of student loans or grants unless the objectives of the programme are stated clearly and explicitly. It is also important to avoid confusion between the objectives of a system of financial aid for students and other social objectives. Some developing countries, for example Nigeria, require all graduates to undertake a period of national service after graduation; and some students regard this as the means by which they repay their debt to society, and therefore may see it as an alternative to student loans. However, a system of national service usually has quite different objectives from a system of financial aid for students: national service frequently involves some form of military training, or is intended to promote national unity. Such objectives should not be confused with questions about how higher education should be subsidised.

The goals of the loan programme must be clarified at the outset. The aims of the loan programme will be partly determined by the choices already made regarding fees:

What is the policy on fees? Do universities and other institutions charge fees for tuition and for accomodation and food? The scope of any student aid programme will depend on whether students are expected to pay fees in public universities and colleges, whether private institutions are permitted, and whether financial aid is made available to students in both the public and private sector.

Once the political choices have been made and the overall objectives of a loan programme are established, the policy maker must choose between various options in the design of a loan programme. These choices can be summarized in terms of ten practical decisions that have to be made:

1. *What form of financial aid will be provided for students?* Will all aid be provided as a loan, or will grants, scholarships or other forms of aid also be available? What will be the relationship between student loans and other forms of aid?

2. *Who will administer the loan programme?* Will it be the responsibility of banks, or of universities and colleges, or will a new agency such as a state-owned student loan fund be established?

3. *Who will be eligible for loans?* What criteria will be used to select eligible students?

4. *What proportion of students will receive loans?*

5. *What size of loan will be provided?* What will be the average and maximum annual loan, and total borrowing limit?

6. *What will be the repayment terms for student loans?* What will be the interest rate and the length of repayment?

7. *How much burden of debt should students be allowed to accumulate?* Will provisions be made to ensure that students do not face excessive debt burdens, or to reduce the burden of debt in particular circumstances?

8. *How will loan repayments be collected?* What measures are necessary to keep default to a minimum?

9. *Will the loan programme incorporate incentives?* Will favourable loan terms be granted as a reward to students who achieve high grades, or to influence student behaviour and choice?

10. *How flexible will the loan programme be?* Will there be special provisions for particular categories of student, e.g. married women, or those who study abroad? Can mechanisms be developed so that the loan programme can adapt to new conditions?

This chapter examines each of these policy choices in turn.

1. What form of financial aid will be provided for students?

In a few countries some students or their parents are expected to pay the full cost of higher education, for example if they attend private universities. However in every country some forms of financial aid are provided by government or by private agencies. These include:

(a) Grants, Scholarships or Bursaries provided by government, and which may awarded:

- to all students, regardless of their individual circumstances (e.g. the 'student stipends' provided in many African countries)
- on the basis of financial need (e.g. the means-tested grants provided to university students in Britain)
- on the basis of academic merit (e.g. competitive scholarships offered in several countries)
- on the basis of *both* financial need *and* academic merit.

(b) Bonded Scholarships or Bursaries which in some countries are provided by governments for students in particular fields, such as teacher training, medicine, or engineering. Such scholarships are primarily regarded as a form of graduate recruitment, rather than financial aid for students, and in France such bonded scholarships, which are offered on a small scale by some government departments, are in fact called 'pre-salaries.'

(c) *Sponsorship by Public or Private Employers* which, like bonded scholarships, is regarded in many countries as a form of graduate recruitment for shortage occupations, particularly engineering.

(d) *Private (non-government) Scholarships, Grants or Bursaries* offered by charitable foundations in many countries.

(e) *Subsidised Services for Students* which may include low-cost housing or subsidised meals, and cheap travel, provided in many countries.

(f) *Subsidised Job Opportunities for Students* which are offered in some private universities and occasionally by governments (e.g. the federal government College Work-Study Program, in the USA, which offers low-income students the chance to work part-time in campus-based jobs in college libraries, refectories etc.).

(g) *Tax Concessions for Private Educational Expenditure* which allow students or their parents to offset fees against tax liabilities, (e.g. Tuition Tax Credits, which have been introduced in Canada and proposed in the USA).

(h) *Vouchers* which have been proposed in some countries as a way of helping students or their parents to pay school or university fees.

(i) *Subsidised Student Loans* which may offer varying degrees of interest subsidy, long repayment periods and in some cases, 'loan forgiveness clauses', which mean that students may have part of their debt cancelled in certain circumstances.

(j) *Unsubsidised Student Loans* which may be offered by commercial banks at market interest rates, to either students or their parents to enable them to finance higher education. In some cases these are backed by a Government guarantee (e.g. the Parent Loans for Undergraduate Students (PLUS) Program in the USA).

Given the wide range of options for combining grants, loans, and other forms of financial aid, the debate that is waging in some countries, couched in terms of 'loans versus grants' is misconceived. Instead, the policy maker should consider alternative combinations of grants, loans, interest subsidies and other forms of financial aid, and choose the most cost-effective combination, taking into account:

(a) the *objectives* of student aid policy: is priority to be given to rewarding academic merit, to satisfying manpower goals, or to achieving equality of opportunity by removing financial obstacles?
(b) the relative *costs* of different forms of financial aid, including both direct expenditure, administrative costs and 'hidden costs', such as the costs of subsidising loans or the costs of defaults.

If financial aid is provided in the form of a loan which must be repaid, rather than in the form of a grant or scholarship, the final cost to the government will be lower, and for a given outlay more students can receive financial aid. When public funds are scarce it is likely to be more efficient, therefore, to provide financial aid in the form of a mixture of grants and loans than to rely only on grants.

The extent of the saving to public funds will depend on the terms of the loan. Most loan programmes involve some form of subsidy, in the form of low interest rates, long repayment periods and cancellation of debt for certain categories of students. This means that all subsidised loans, particularly those that are interest-free, such as the loans recently introduced in the Federal Republic of Germany, involve a substantial 'hidden grant' (see boxes on pages 30 and 31).

The Cost of Alternative Combinations of Loans and Grants

Student aid in Canada is provided through a mixture of loans, subsidised and guaranteed by the Federal Government (the Canada Student Loan Program, CSLP), grants financed by provincial governments, and loans subsidised and guaranteed by provincial governments. Total government expenditure in 1979-80 was Canadian $280 million, which was distributed between grants and loans in a ratio of 60:40 and provided grants for 20% and loans for 30% of all full-time students.

A Federal-Provincial Task Force on Student Assistance in Canada in 1981 estimated that to continue to allocate the student aid budget in the ratio of 60% grants, 40% loans would cost $400 million in 1981–82. To change to an all-grants programme would cost an additional $290 million but to change to an all-loans programme would save $185 million.

The Task Force therefore concluded: "For a budget of a given size there was a direct relationship between the proportions of loans in the program and the number of students who could be assisted. Conversely, the same number of students could be aided at less cost to governments in programs that contain more loans than in programs that contain more grants." (Canada Task Force 1981, p. 137).

The 'Hidden Grant' in some Student Loans

If loans are offered to students at a very low rate of interest, or even interest-free, the real value of the loan repayments will be worth less than the amount borrowed, because of the difference between the subsidised (or zero) interest and market rates of interest.

If the government offers students loans at 4%, but the market rate of interest is 10%, then the government is sacrificing 6% interest. If the student loan is repaid over a 10 year period, as in the USA, or even over 20 years as in Germany and Sweden, then the government will lose 6% interest each year and the cumulative value of student loan repayments is considerably lower than the value of loan repayments at a market rate of interest of 10%.

This loss to the government is, of course, a gain to the student, who would otherwise have to pay 10% interest. The monetary effect is the same as if the student had been given a loan, at a full market rate of interest, plus a grant. A recent research study by Johnstone (1986) uses this type of calculation to estimate the gains to the student borrower and the losses to the government involved in the subsidised loan programmes in the Federal Republic of Germany, Sweden and the USA. The student's gain is described as a 'hidden grant'. This hidden grant is much less in the USA, where students with Guaranteed Student Loans (GSL) have to pay 8% interest and repay within 10 years than in Germany, where the loan is free of interest and repaid over 20 years. In fact if we compare the discounted present value of loan repayments at the subsidised interest rate and a market interest (ie. discount) rate of 10%, then an American student with a GSL actually repays only $750 of every $1,000 borrowed, which is equivalent to receiving an unsubsidised loan of $750 and a $250 grant. Similarly, if we assume a discount rate of 10% a Swedish student in effect receives a 50% grant and 50% unsubsidised loan, and a German student a 78% grant and only 22% loan. If we assume a higher discount rate, then the hidden grant is even larger. The detailed calculation is shown on the next page, with alternative discount rates of 10% and 12%.

Present Value of Repayments on 1,000 Units of Initial Lending, United States, Sweden, and Federal Republic of Germany, Assuming 1.5 Years In-School, and Using Discount Rates of 8, 10, and 12 Percent

	United States	Sweden	Federal Republic Germany
Repayment period	10 years	(a)	20 years
In-school assumption	1.5 years	1.5 years	1.5 years
Grace period	0.5 years	2.0 years	5.0 years
Interest during in-school	0 percent	4.2 percent	0 percent
Interest during grace period	0 percent	4.2 percent	0 percent
Interest during repayment	8 percent	4.2 percent	0 percent
Original loan	$1,000	1,000 Skr	DM1,000
Period from origination to repayment (in-school plus grace)	2 years	3.5 years	6.5 years
Debt at start of repayment	$1,000	1,155 Skr	DM1,000
Mode of repayment	equal quarterly	graduated annual	equal quarterly
Amount each payment	40 @ $36.56	(b)	80 @ DM12.50
Present value of repayments at 10% discount rate	$753.25	471.90 Skr	DM226.62
Hidden grant at 10% discount rate	$246.75	528.10 Skr	DM773.38
Present value of repayments at 12% discount rate	$667.11	380.46 Skr	DM175.05
Hidden grant at 12% discount rate	$332.89	619.54 Skr	DM1824.95

[a]The repayment period in Sweden is normally the number of years between the initiation of repayment and age 51; a 20-year repayment period is most often used for illustration.

[b]The first annual payment on the Swedish debt of 1,155 Skr would be 57.76 Skr, which payment would increase each year for 20 years at a 4.2 percent annual rate of increase, and which repayment stream would amortize the starting debt at an annual interest rate of 4.2 percent.

Source: Adapted from Johnstone (1986) p. 170

Finally, the choice between alternative types of aid must also take account of political, administrative and other factors which may determine the *feasibility* of alternative options.

The actual combination of loans, scholarships and grants should also take account of such factors as:

* methods of determining eligibility
* the costs of administration
* loan repayment terms
* the expected level of default.

All these factors will be discussed in the remainder of this chapter.

2. Who will administer the loan programme?

Any government establishing a loan programme with government guarantees, interest subsidies or direct provision of loans will need to set up a planning committee, including representatives of:

* The Central Planning Ministry (if such exists)
* The Finance Ministry
* The Central Bank
* The Ministry of Education
* Universities, Colleges or other relevant institutions.

This planning committee is likely to have overall responsibility for designing the loan programme. Before deciding on the terms of loans to be offered, it will be necessary to decide who will be responsible for the following four administrative functions:

(a) *Selection of loan recipients*

Who will be responsible for processing loan applications, administering means tests or applying other criteria, and selecting the students who will receive loans?

(b) *Providing loans*

Who will distribute loan funds to students?

(c) *Guaranteeing the loans*

What form of guarantee will be provided or required? Some programmes require a personal guarantee from a parent or

other responsible adult. In most countries the government provides the ultimate guarantee that the loan will be repaid in cases of death or default by the borrower, but in some countries there is also an intermediate guarantee agency.

(d) *Securing repayment of loans*
Who will be responsible for collecting loan repayments, and for pursuing defaulters?

Day-to-day responsibility for administering the loan programme may be given to:

* a government agency set up for the purpose, such as the Central Study Assistance Committee in Sweden, the Joint Committee on Student Finance (JCSF) in Hong Kong, and the Students' Loan Bureau in Jamaica,
* a quasi-government agency, such as the Japan Scholarship Foundation,
* a government agency with other financial responsibilities, such as the Pakistan Banking Council, which administers student loans in Pakistan,
* a state-owned commercial bank, such as the People's Bank in Sri Lanka, or the Bank Negara Indonesia, which administers loans in Indonesia,
* private commercial banks, which administer the Guaranteed Student Loan Program (GSLP) in the USA, and the Canada Student Loans Plan,
* universities, colleges and other education institutions, which administer the National Direct Student Loan Program (NDSLP) in the USA, or
* student welfare organisations, such as 'studentwerke' in the Federal Republic of Germany.

Some programmes divide responsibility for the different administrative functions between different agencies. For example, universities or colleges may be given responsibility for selection, and commercial banks may actually provide the loans and collect repayments. The justification for this is that commercial banks

may have considerable expertise in the management of loans and collection of repayments, but little knowledge of the education system; while University teachers may be well equipped to make academic judgements, but less experienced in judging financial need, and not at all experienced in administering and controlling loans.

The choice of administrative model may depend partly on the banking and educational structures of the country. For example the USA has an enormous range of banking and credit institutions, public and private universities and colleges, private proprietary schools offering vocational courses, and a considerable degree of student mobility and credit awareness in the population. In these conditions a single centralised system would be impossible. In fact the USA does not have a single loan system but a complex combination of loan programmes with day-to-day administration being shared between student loan administrators in 3,000 universities and colleges, who select loan recipients; 20,000 banks, savings and loan associations and credit unions, which actually provide student loans; state guarantee agencies, set up by the state legislatures to provide loan guarantees; and a secondary market for student loans, the Student Loan Marketing Association (SLMA, or Sallie Mae as it is colloquially called). In other words student loans are big business in the USA, and highly profitable for the banks, because the federal government and state guarantee agencies provide a variety of interest subsidies and guarantees against default. Similarly in Canada, where every province has its own student loan programme, in addition to the Canada Student Loan Programme, private banks provide loans, backed by Government guarantee.

Such a system involves substantial administrative costs, but it also means that the capital for student loans is provided by private investors, rather than the government. This reduces the financial burden on the public purse. The government does not finance student loans directly, but meets the costs of guaranteeing the loans against default and subsidising borrowers and lenders. In the USA students borrowed over $9 billion in 1985–6, but the total cost to the Federal Government was only one third of this, at $3.2 billion. Thus every dollar spent by the federal government generated $2 in private capital for student loans.

In developing countries, which do not have the vast network of

private banking and financial institutions of Canada or the USA, special agencies may have to be established. Alternatively responsibility for providing loans may be given to a state-owned bank. The choice between setting up a specialised agency or using state-owned or commercial banks, will depend on:

- the structure of financial institutions in the country, their responsibilities, coverage and location, and experience in administering loan programmes
- the relative costs of setting up a new agency or using existing financial institutions
- the special requirements of external agencies such as international development banks, which may be involved in financing a student loan programme, and may wish to establish special procedures for ensuring adequate financial control and monitoring.

Countries such as Jamaica and Barbados, which established student loan programmes with the help of loans from the Inter-American Development Bank (IDB), have chosen to set up specialised agencies: the Students' Loan Bureau in Jamaica and the Student Revolving Loan Fund in Barbados (see box on p. 36). It was judged that existing financial institutions, such as commercial banks, did not have the capacity or expertise to select student loan recipients, administer the loans, and monitor the effectiveness of the loan programme. Specialised agencies were therefore set up, with close links with the Ministry of Education, the central bank and with educational institutions, and these agencies were given responsibilities for selecting loan recipients, determining the financial and other conditions of the loans, determining the size of loans offered to students, and day-to-day administration of the loan programme, including collecting data and maintaining records to allow regular monitoring.

In other countries it may be cheaper and more effective to give responsibility for day-to-day administration to commercial banks which already operate other types of loan programme. For example, in Indonesia, responsibility for the student loan programme, Kredit Mahasiswa Indonesia (KMI) was given to the largest state-owned commercial bank, Bank Negara Indonesia

Student Loan Agencies in Jamaica and Barbados

In Jamaica the Students' Loan Bureau was set up in 1970, with initial capital provided by the Bank of Jamaica, partly financed by a loan from the Inter-American Development Bank (IDB) and partly by counterpart funding from the Government of Jamaica. Since it was established, the Students' Loan Bureau has awarded over 12,000 loans. The Student Revolving Loan Fund (SRLF) was set up in Barbados in 1976, also financed through a loan from IDB. Both are specialised agencies, with responsibility for day-to-day administration of student loans on the basis of terms agreed with the government, which provides guarantees against default and also subsidises the interest on student loans.

More details of the SRLF in Barbados, including a description of its administrative structure, are given in a case study in Chapter 4.

(BNI), which already had responsibility for other government credit programmes such as loans for industry and agriculture. BNI already had considerable experience of managing loan programmes, but no knowledge of how to select the most 'deserving students'. Responsibility for selecting loan recipients was therefore delegated to the Rectors of individual universities. This helps to reduce the direct costs of administering student loans, but at the expense of increased administrative burdens for universities.

In fact many countries rely heavily on the staff of universities and other institutions to process loan applications and select loan recipients. This may impose substantial additional work on academic or administrative staff, and in some cases universities employ special staff to administer student aid. This represents a 'hidden cost' of many student loan programmes. Even if no additional staff are employed there is an 'opportunity cost' if university staff are required to spend their time administering loan programmes instead of teaching or administering higher education programmes. Whether or not university staff are involved in the

day-to-day administration of student loans, by selecting loan recipients, experience in many countries suggests that their co-operation is vital for the success of the loan programme.

Decisions about who will process loan applications and select the students who will receive loans have an important influence on the direct cost of administering student loan programmes. Experience shows that these costs vary considerably. In the USA it is estimated that the annual cost of servicing each Guaranteed Student Loan is between 1.5 and 2% of the loan, and in Sweden, the annual costs of administration are about 1.8% of the total student aid budget. In Hong Kong, the direct cost to the JCSF of administering loans is 2.2% of their total expenditure, but the total costs of administration are probably nearer 4%. In Jamaica, on the other hand, 10% of the total budget was earmarked for administrative expenses when the Students' Loan Bureau was first set up. But this represented the cost of setting up the administrative machinery for the loan programme, rather than the regular cost of administering an established programme.

The annual cost of administering a loan programme will depend on:

(a) the size of the programme, which determines whether economies of scale are possible;
(b) the complexity of the regulations; and
(c) who selects borrowers.

If the loan programme relies on university staff to select, as in Indonesia, the direct costs of processing applications fall on the institutions, rather than on the loan agency, as in Hong Kong. But, as emphasised above, this hidden cost should still be taken into account. In choosing between alternative administrative models, the policy maker must take account of all the likely costs and also the efficiency of alternative options, which will depend on the capacities of existing institutions.

A further choice has to be made about what form of guarantee will be provided for the loans. The options are:

- borrowers must provide personal guarantees eg. a relative who will be personally responsible for the loan in cases of default, as in Hong Kong;
- the government guarantees against default or non-repayment of the loan due to the illness or death of the borrower;
- the loans are insured with a government-backed insurance agency, as in Indonesia; or
- the loans are guaranteed by specially established guarantee agencies, for example the guarantee agencies set up by the state governments in the USA (see boxes below and on p. 39).

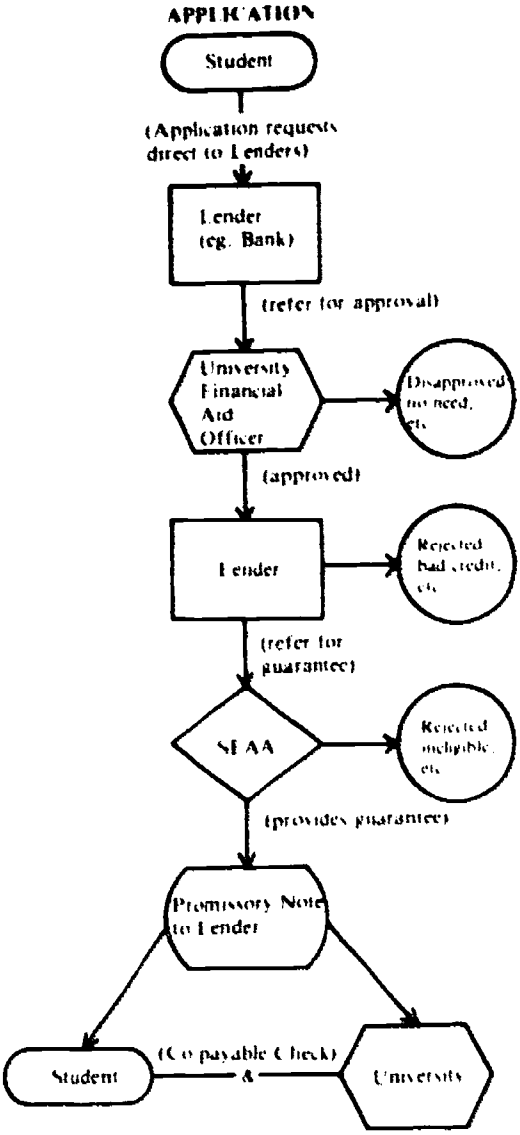
State Guarantee Agencies for Student Loans in the USA

Many states in the USA have set up their own agencies to administer and guarantee student loans. For example the State of Virginia has established a State Education Assistance Authority (SEAA), which aims to make private capital available for low-cost long-term educational loans and to ensure that they are administered as efficiently as possible. In 1985 the Agency guaranteed nearly 50,000 GSLP loans, and was responsible for 293,000 loans outstanding. The agency monitors the banks providing the loans, tries to ensure that collection procedures are efficient and that defaults are kept to a minimum, and meets the cost of default claims if the borrower is unable to repay the loan. The cumulative default rate on all SEAA guaranteed loans over the last 25 years has been 5.7%, which compares well with default rates in many other states of the USA.

A simplified diagram of the steps involved in the processing of a loan application by the lender (usually a bank), the university and the SEAA is shown on the next page.

Operations and Processing of Loans by the State Education Assistance Agency (SEAA) of the State of Virginia, USA

The borrower's completion of an application for the GSL or PLUS loan is the first of several steps. The borrower initially obtains an application from a participating lender. :The format of the application guides the borrower through the necessary steps for approval by the school, the lender and the SEAA. In summary, these steps are as follows:



The choice between alternative arrangements for guaranteeing student loans will depend partly on whether a government-backed insurance agency already exists to provide other forms of loan guarantee. The government provides the ultimate guarantee against default in all subsidised loan programmes, so that the simplest option for most developing countries is for the government to guarantee student loans directly. On the other hand, several countries require borrowers to provide their own personal guarantees, even though this may discourage students from the poorest families.

3. Who is eligible for loans?

One of the first decisions, when designing a student loan programme, is whether it should be:

(a) available to all students who wish to borrow, or
(b) selective, and confined to particular categories of student.

If the loans are subsidised, then (b) is preferable on grounds of cost-effectiveness.

If the scheme is selective, the basis of selecting recipients may be:

* academic merit,
* financial need,
* a combination of both merit and need,
* type or subject of study, or
* institution.

In some countries scholarships are awarded on the basis of academic merit, and loans are provided on the basis of financial need. However, most loan programmes involve some element of subsidy, either by means of interest subsidy, or cancellation of debt in certain circumstances. At a time of increasing pressure on public funds most countries are therefore obliged to ration subsidised loans, and make both loans and scholarships dependent on financial need.

In the USA, where different interest rates apply to different loan programmes, a strict means test is now applied to determine

eligibility for subsidised loans. During the 1970s the means test was relaxed as a result of the Middle Income Student Assistance Act (MISAA), which made the Guaranteed Student Loan Programme (GSLP) available to all students, regardless of parental income. This caused a huge increase in the number of borrowers, and the costs to the federal government of subsidising loans rose from US$437 million in 1975 to $2,425 in 1981. This illustrates the danger of making a loans programme 'open-ended', with little attempt to make eligibility selective. The escalating costs of the GSLP in the 1970's caused serious concern, and since 1981 a means test has once again determined eligibility for GSLP loans.

An alternative approach is to give loans only to students who satisfy stringent academic criteria. For example in Indonesia, university students are eligible for loans only when they have already completed satisfactorily about 75% of their courses. This reduces the risk that the student may drop out before completing the course, but it also means that students must already have overcome considerable financial and academic hurdles in order to qualify for a loan.

The choice between alternative eligibility criteria may sometimes involve a conflict between efficiency and equity objectives. For example, in several programmes loans are given only to students in public universities, on the ground that the quality of private universities is variable and inferior to public universities, and that those who can afford private education do not need financial aid. This decision to opt for a selective loan programme helps to keep down the costs of the student loan programme. The alternative option of an 'open-ended' programme would involve considerably higher expenditure.

On the other hand, if access to subsidised loans is confined to a privileged group of students who already enjoy other forms of subsidy, it raises questions of equity. In most countries, students in public universities already enjoy subsidised tuition so that if these students also receive subsidised loans they will enjoy a double advantage, compared to students in private universities, who must finance tuition fees as well as living expenses. Moreover, students in private universities are not necessarily wealthy. In Indonesia, for example, a recent survey showed that students in public and private universities had very similar family income levels. However,

students in public universities pay substantially lower fees than students in private universities, and are eligible for student loans, whereas students in private universities, not only pay higher fees, but are not eligible for loans. Thus, on grounds of equity it would be preferable to make access to loans dependent on financial need rather than on type of institution. However a programme based entirely on financial need may have higher drop-out rates than a programme confined to academically strong students. Thus it might be regarded as more equitable but less efficient than a programme based on academic criteria.

In determining the criteria for eligibility for loans, the policy-maker should therefore consider both:

(a) the *efficiency criterion*, which will favour loan recipients who are chosen on academic grounds as likely to succeed in their studies and to repay their loans.
(b) the *equity criterion*, which will take account of the financial need of applicants.

The selection of students who meet the academic criterion is usually left to the staff of universities, colleges or other educational institutions. Academic staff are probably best equipped to judge whether a student is likely to complete his/her studies successfully, and most student loan programmes require that borrowers maintain 'satisfactory academic progress'.

The question of how to determine financial need raises more difficult issues. A means test which takes family income into account can be used to determine eligibility for grants or subsidised loans. One option is to adopt a 'sliding scale' which calculates an assumed parental contribution to the costs of higher education, and then provides loans or grants to cover the difference between the assumed parental contribution and the actual costs of study. This raises the question of how to obtain information about family income level. Countries such as the Federal Republic of Germany require students to submit a copy of their parents' income tax return, which is used to determine family income level. Others require students to fill in a form to provide this information. Sweden is unusual in taking no account of parental income in determining eligibility for loans. All students over the age of 20 are

assumed to be financially independent, so that the means test is applied only to students' own incomes.

The College Scholarship Service in the USA has developed a complex methodology of 'need analysis' which takes account of family income, the number of dependent children, any unusual factors such as medical expenses, and the value of assets, including the family home. The assumption underlying needs analysis in the USA is that parents are expected to make a significant contribution to the costs of their children's education, if they can afford it. Many other countries also use a test of financial need to determine eligibility for student loans. For example, in Canada, parents are expected to contribute to the cost of their children's higher education, and eligibility for loans is determined on the basis of various criteria, including financial need (see boxes on pages 44 and 45).

In developing countries the administration of a means test may present considerable problems because of the lack of accurate data on family incomes for income tax or other purposes, particularly in a subsistence economy. In general, an effective means test, or test of financial need, requires information on:

* numbers in the family group
* earned income of all members of the family
* non-earned income
* ownership of assets such as property or land
* number of dependent children
* special circumstances (eg. unemployment or illness).

In Latin America some educational institutions apply a 'sliding scale' of fees, which requires detailed information about family income. In Peru, for example, universities change differential fees according to a student's family income level, which is judged on the basis of parents' earnings, number of dependents, and assets such as land, property, bank accounts, savings etc. In order to estimate a student's 'ability to pay', university staff require extensive information about family income. In Peru this is collected in a personal interview with students and their parents. In these interviews they ask questions about ownership of assets such as a

Determining Eligibility for Student Loans

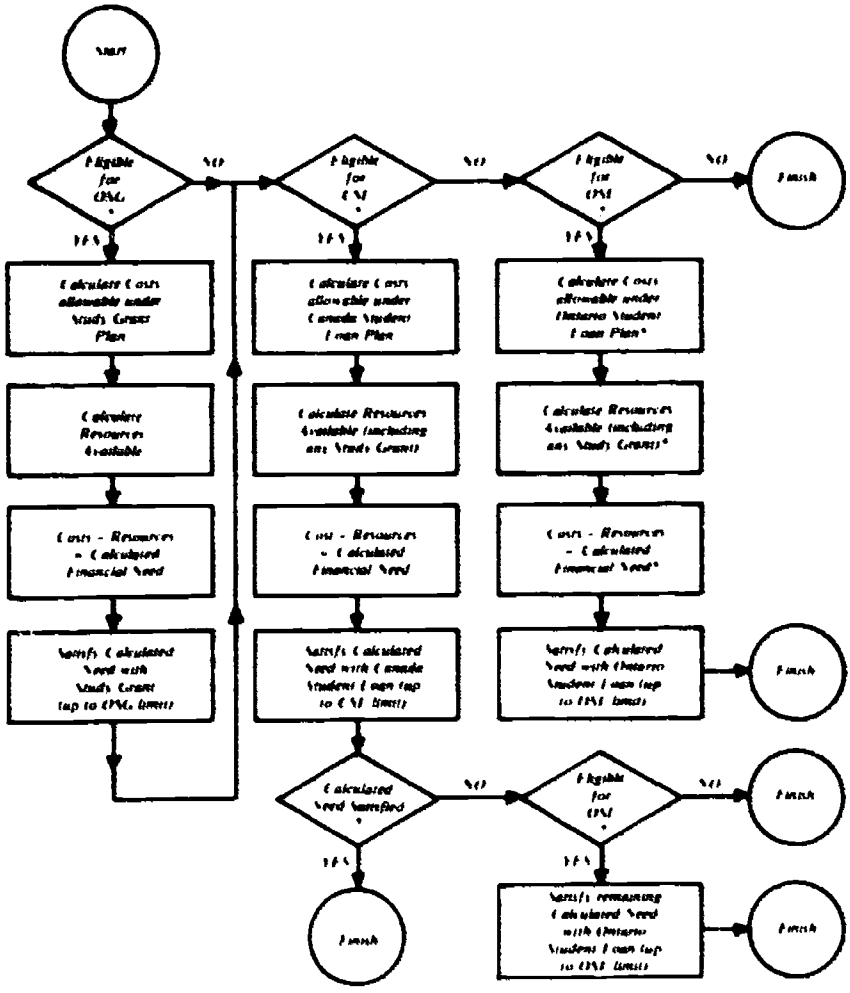
In **Hong Kong**, *applicants for loans have to provide information on both earned and unearned income of all members of the household and all brothers and sisters, even if resident outside Hong Kong. This must be supported either by documentary evidence or by a signed certificate from employers, and all family and household members must sign a form which allows the Joint Committee on Student Finance (JCSF) to investigate the accuracy of their statements. Spot-checks are made on a random sample of applications, and these include visits to the home to verify details provided. Applicants who provide false information are liable to be prosecuted, which reduces the temptation to cheat. Such a system is expensive to administer, but does ensure that loans are given only to students with genuine financial need.*

In **Canada**, *the terms of student loans vary between the provinces. In the province of Ontario, for example, applicants must satisfy various criteria including:*

- *Citizenship*
- *Residence*
- *Study in an approved institution*
- *Study on an approved course*
- *Satisfactory Scholarship standing*
- *Calculated financial need, taking into account the costs of different courses, and a student's 'available resources', including parental income.*

The assessment process in Ontario is illustrated on the next page.

The Assessment Process for the Ontario Student Assistance Program



*Same as for CSL

Key OSG Ontario Study Grant
CSL Canada Student Loan
OSL Ontario Student Loan

house, or car, as well as about parents' jobs and earnings. Such questions provide only a very rough picture of family income level, but they may help to supplement information provided on an application form to determine eligibility for grants, loans or reductions in tuition fees.

However, a means test that relies on personal interviews is time-consuming and expensive. Moreover in some countries it would be impossible, for geographical or administrative reasons. It may be better, therefore, to establish eligibility for loans in two stages. Initially students should provide written evidence; this may be supplemented, where necessary by an interview.

Some countries, such as Hong Kong, require very detailed tests of family income and ability to pay. This may provide detailed and accurate information about family incomes, but there is likely to be a trade-off between detailed, accurate information and the costs of collection and verification.

4. What Proportion of Students will Receive Loans?

One crucial decision to be made in designing any system of student support is the scale of the programme, as measured by the number and proportion of students who benefit. The number of grants or loans awarded each year will obviously depend on the size of the country, its wealth, and the structure and finance of higher education.

There are considerable variations in the proportion of students who receive financial aid in different countries. Some loan programmes are very small, in term of both actual numbers and the proportion of students receiving assistance, whereas some richer countries help the majority of students by means of loans. In Sweden about 60% of all students and 80% of full-time students receive loans. In Japan, on the other hand, only 11% of undergraduates receive loans. In Hong Kong roughly half of all full-time students receive loans, but in many developing countries where loan schemes operate the proportion of students who have loans is under 10%.

Decisions about the proportion of students who can be given financial assistance will depend partly on fee policies. Where students are expected to pay fees for tuition or for board and

lodging, there is a more obvious need for a programme of financial assistance than in countries where fees are minimal and institutions highly subsidised. Some developing countries, particularly in Africa, not only provide free tuition but also provide free board and lodging or give generous scholarships or grants for living expenses. This may be the result of geographical factors which make boarding necessary, but it increases the public costs of higher education substantially.

In determining the size of a loan programme, the planner should consider the costs of alternative options, taking account of:

- the number and proportion of the age group who participate in higher education
- the criteria for eligibility; i.e. is selection on the basis of merit or financial need?
- the level of tuition and boarding fees
- availability of other forms of financial assistance.

The costs of a selective loan programme will obviously be lower than those of a universal scheme, but in some circumstances a country could actually reduce expenditure by introducing loans, even if *all* students were eligible for a loan. A country which charges low or zero fees for tuition and boarding, or provides tuition fees and scholarships or stipends for all students, could save public expenditure in the long run by giving loans instead of scholarships and stipends. The extent of the saving would depend on the cost of education, the terms of the loans, and the success in securing repayment. A recent World Bank study (Mingat and Tan 1986) showed that student loans which would be repaid over 10 years, with loan repayments equalling 5% of graduates' average incomes, could recover a significant proportion of university costs in many developing countries. The scope for cost recovery varied from 16% in a typical country in Anglophone Africa, 36% in Francophone Africa and over 40% in some Latin American countries. Differences in the extent of the savings reflect differences in the costs of higher education and in average graduate salaries, but in all these cases the introduction of a loan programme could result in a reduction in public subsidies for higher education, even if *all* students receive a loan.

On the other hand, a country which provides very little financial assistance for students may choose to introduce a small-scale loan

programme for students in financial need. In such cases a loan scheme which covers only 5 or 10% of all students would nevertheless represent a substantial increase in financial aid, and if the loan scheme is heavily subsidised — with a long repayment period and low interest rate — it would require an increase, rather than a reduction in public expenditure.

This emphasises, once again, that decisions about the scale and the terms of a loan programme will depend on whether the government wishes to increase or to reduce the level of subsidy for higher education.

5. *What Size of Loan will be Provided?*

In deciding what size of loans should be made available to students, the planner must determine the *average* and the *maximum* loan per student, both in terms of annual borrowing limits and the maximum total debt that a student may incur. This must take account of:

* the average costs of higher education to the individual student, ie. tuition costs, books, educational materials, living expenses and travel; which of these items of cost will be covered by the loan?
* variations in costs or charges, particularly between public and private universities and colleges, or between different levels and subjects within these institutions;
* the length of course;
* other sources of financial aid; and
* opportunities for part-time employment.

Many student loan agencies conduct regular surveys of student expenditure, and try to relate the size of loans to what students actually spend. In other cases, the size of loan is fixed with reference to a 'typical budget', which is drawn up in consultation with university authorities. In developing countries this may be simpler than attempting a detailed survey of what students actually spend, but it is important to ensure that the typical budget is realistic.

Setting the maximum size of loan also needs to take account of what is regarded as a 'manageable' debt, ie. a debt which can be repaid without imposing excessive burdens on borrowers, which could either lead to high rates of default, or to distortions in the future spending of graduates.

What is a manageable debt for student borrowers? Answers vary between countries, and depend partly on the level and pattern of graduates' expected earnings, and partly on what students and society regard as a 'reasonable' level of debt, which depends on a variety of cultural factors. The borrowing limits, which determine the maximum size of loan, will therefore be dependent on two related policy decisions:

* What are the repayment terms for the loans? (See Section 6)
* What is an acceptable burden of debt? (See Section 7)

6. What are the Repayment Terms for Student Loans?

The repayment terms of a loan determine how quickly a borrower will repay the amount of money borrowed (the capital) and the rate of interest charged (if any). In fact the repayment terms actually depend on a series of decisions:

(a) What rate of interest will be charged?

Should student borrowers pay interest which reflects market rates of interest, or will the government subsidise the interest on student loans? Most loan programmes provide some interest subsidy, in order to encourage students to invest in higher education, particularly in the case of low income students. However the rate of interest charged varies enormously (see box on p. 50). There are a few cases of interest-free loans, for example in West Germany. In Pakistan loans are interest free because the Islamic religion is opposed to the concept of interest or usury. However, in many countries high rates of inflation have forced governments to charge high rates of interest. For example, the ICETEX loan programme in Colombia now charges 25% a year, which reflects the very high rates of inflation in many Latin American countries in recent years.

Repayment of Student Loans

Student loans in **Indonesia** *are available on the basis of a strict means test at 6% interest, and must be repaid in 5 to 7 years. There is a grace period of one year before graduates are required to begin repayment. After one year they are expected to repay their loans by means of regular monthly instalments. In the case of public sector employees (such as teachers or civil servants), loan repayments are deducted at source by the employer; but other employees are expected to pay their monthly instalments at the local branch of the state-owned bank(BNI 1946), which administers the loan scheme. The maximum loan repayment is fixed at 30% of a graduate's gross monthly salary, but the majority of graduates pay considerably less than this. A typical monthly repayment is Rp 10-12,000, which is 10% of the starting salary of a graduate in the civil service.*

In **Japan**, *there are two types of loan: students at the upper secondary level, and low-income university students are eligible for interest free loans; university students who do not qualify for an interest free loan, on grounds of low income, can have a loan at 3% interest. Annual instalments depend on the size of the loan.*

In **Canada**, *loans are interest-free during study, and during a 'grace period' of six months. After this, the rate of interest that a borrower pays is fixed by the provincial student loan agency, in relation to market interest rates. This means that students who borrow when interest rates are high must pay more than those who borrow when interest rates are low. In the early 1970's the interest on student loans varied between 7 and 9%, but in the early 1980's the rate of interest was between 13 and 15%.*

The relationship between market rates of interest in a country and the rate of inflation is often complex. High rates of inflation usually mean high rates of interest; but there is often a time lag.

Decisions about interest rates must, therefore, take account of both market rates of interest and inflation. In fact, it is the relationship between inflation and interest rates that determines the *real* rate of interest of a loan (i.e. the nominal interest rate minus the annual level of inflation).

One option, which has been adopted in some countries, is that graduates are not charged a fixed rate of interest but are expected to repay their loans in terms of money of constant purchasing power. This was tried in Sweden during the 1960's, when a student's total debt was linked with the cost of living index and the amount to be repaid rose each year in line with inflation. However when inflation increased in the 1970's, graduates disliked the uncertainty involved, and Swedish loan repayments now rise by a constant amount each year, which is equivalent to an interest rate of 4.2%. If the annual rate of inflation is higher than this, then the *real* interest rate on student loans will actually be negative. Whenever the interest rate on student loans is less than the true market rate of interest (taking account of alternative investment opportunities and inflation), then this is equivalent to providing a 'hidden grant', since it means that the borrower will not repay the full value of the loan. (See box on page 30.)

(b) What grace period will be allowed?

Most loan programmes allow a 'grace period' which is intended to give newly qualified graduates a period in which they can find a job and est iblish themselves in regular employment, before they are required to repay their loan. This varies from six months after graduation in Japan to two years in Sweden. In some countries the grace period applies to both interest and capital, which means that borrowers are not liable for any repayments while they are studying and for a period after graduation. An alternative option adopted by some American loan programmes is to charge interest during the period of study, but to allow it to accumulate. This means the borrower does not actually pay interest during the period of study, but the accumulated interest owed is added to the student's total debt on graduation. This option still gives graduates an opportunity to find a job before they must start to repay the loan, but it involves less subsidy than a grace period which is totally interest free.

A problem in many developing countries in recent years is that

students may face a period of unemployment after graduation, before finding their first job. If the grace period is not increased, to take account of the difficulty of finding employment, it is likely to lead to high rates of default. On the other hand, if interest rates on student loans are low, a longer grace period will increase the costs of the interest subsidy.

(c) What is the length of repayment period?

The length of repayment varies from three or four years in Colombia and Hong Kong, to 20 years or more in Sweden and the Federal Republic of Germany. A repayment period of 10 years is fairly typical. Not only does the length of repayment very considerably in different programmes, but there are also variations in the degree of flexibility. One option, adopted in several countries, is to make the length of repayment dependent on the size of a student's debt on graduation. In Sri Lanka, for example, the length of repayment of loans offered by the People's Bank under the University Student's Loan Fund Act of 1972 varies from two to five years, according to the size of a graduate's debt.

An alternative is to fix the repayment period in relation to the length of study. Some Latin American programmes, for example, require students who borrow for four years to repay the loan in four years.

(d) Is the loan to be repaid in equal instalments, or can they be varied, according to a graduate's income?

Many loan programmes require loans to be repaid in equal annual instalments. Some countries have introduced variable repayment schedules, in an attempt to spread the burden of repayment more evenly over the graduate's working life. Graduate earnings generally rise with age, so that repayments in equal instalments will represent a much heavier burden in the early years than in the later years. If, on the other hand, instalments rise with age, the repayment burden will be spread more equally over the life of the loan (see box on page 53).

An alternative option is an 'income-contingent' loan, which means that loan repayments vary with a graduate's income, and students undertake to repay their loans by means of a fixed proportion of their income or earnings. This means that graduates

An Example of a Loan Repayment Schedule

In Sweden, graduates have until their 50th birthday to repay the loan, so repayments of loans are spread over about twenty years. An 'adjustment index' is applied each year. This was originally set at 3.2% (now raised to 4.2%). An example of typical loan repayment schedule in Sweden in 1981, when the adjustment index was 3.2%, is shown below:

Example of Repayment of Student Loans in Sweden, 1981 (S.Kr.)

Year	Total debt 1st January	Annual Payment	Total debt after payment	'Adjustment Index' Increase 3.2%	Total 31st December
1	84,836	4,242	80,594	2,579	83,173
2	83,173	4,378	78,795	2,521	81,316
3	81,316	4,518	76,798	2,458	79,256
4	79,256	4,663	74,593	2,387	76,980
5	76,980	4,812	72,168	2,309	74,477
6	74,477	4,966	69,511	2,224	71,735
7	71,735	5,125	66,610	2,132	68,742
8	68,742	5,289	63,453	2,030	65,483
9	65,483	5,458	60,025	1,921	61,946
10	61,946	5,633	56,313	1,802	58,115
11	58,115	5,813	52,302	1,674	53,976
12	53,976	5,999	47,977	1,535	49,512
13	49,512	6,191	43,321	1,386	44,707
14	44,707	6,389	38,318	1,226	39,544
15	39,544	6,593	32,951	1,054	34,005
16	34,005	6,804	27,201	870	28,071
17	28,071	7,022	21,049	674	21,723
18	21,723	7,247	14 476	463	14,939
19	14,939	7,479	7,460	239	7,699
20	7,699	7,699	0	0	0
Total		116,320		31,484	

Source: Woodhall (1982)

with high earnings repay their loans more quickly than those in low paid occupations. This has been proposed in the USA and in Britain, but there have been very few examples of truly income-contingent loans. One or two private universities in the USA experimented with income-contingent loans in the 1970's (Johnstone 1972) and recently some universities have once again begun to experiment with new types of loan. It is possible, therefore that income-contingent loans may re-emerge in the USA, but there are as yet no examples in developing countries.

In choosing between the various options, the planner must take account of:

* the costs to the government of alternative rates of interest subsidy
* the burden of debt facing borrowers
* the likely rate of default if repayment terms are too harsh.

There will inevitably be certain trade-offs to be considered. For example, generous repayment terms may make it much easier to introduce a loan scheme for the first time, but will increase the costs to the government. An increase in the interest rate or a reduction in the length of repayment or grace period may generate a saving of public funds, or it may simply increase the rate of default, or discourage students from taking loans.

There may also be a trade-off between a longer repayment period and a higher rate of interest. For example, in Hong Kong loans until 1987 were interest free but there was no 'grace period' and students normally repaid their loans within five years of graduation. The interest subsidy in such a scheme may cost the government no more than under a programme which charges interest, but permits a longer repayment period.

In designing a loan programme, therefore, an administrator needs to calculate the costs of alternative levels of subsidy which result from different interest rates and different repayment terms. Chapter 3 suggests how a computable model can be developed to examine the effects of alternative repayment terms and other variables both on the cost of the loan programme to the government, and on the burden of debt facing a graduate who has financed higher education by means of a loan.

7. How much Burden of Debt should Students Accumulate?

The maximum size of loans depends on decisions about what is an 'acceptable' burden of debt. Some loan programmes are particularly concerned to ensure that the burden of debt does not impose financial hardship on graduates who are repaying their loans, while others are more concerned with cost recovery.

The Swedish system is unusual in providing for automatic postponement of repayments in cases where graduates have low incomes, due to illness, unemployment or employment in low-paid jobs, or because they are looking after children and unable to work. In 1985 13% of graduates were granted such postponement. This takes care of the problem of married women who cannot repay their loans while they are looking after babies or young children — a problem which is sometimes used by critics of loans to suggest that they will discourage women, by acting as a 'negative dowry'. In Sweden a married women may postpone repayment and her debt is not automatically transferred to her husband, which means that Swedish women are just as willing to borrow as men. However, such a scheme imposes substantial costs on the government, which both guarantees the loans and pays an interest subsidy.

Very few countries follow the Swedish example in providing for automatic postponement of repayment if graduates have low incomes. The alternative is to stipulate that graduates must apply to the bank or loan agency, in cases of financial hardship, in which case the question is what constitutes 'hardship'. Some programmes state that postponement is possible only in 'exceptional circumstances', such as serious illness; others are more liberal in granting postponement.

Any definition of financial hardship raises the question of how much of a graduate's income should be devoted to loan repayments. Most loan programmes set borrowing limits that mean, on the basis of average wage and salary levels, that most graduates have to devote no more than 10% of their income to repaying their loans. In some countries a proportion of 10% may be regarded as too high, while in other cases, an even higher proportion may be regarded as reasonable, particularly if there is a substantial difference between graduate and non-graduate earnings.

In the case of other types of loan, commercial banks usually set their own yardsticks. For example, when lending for purchase of

What is a Reasonable or an Excessive Level of Debt?

This question has caused much controversy in the USA, where 4.3 million students borrowed over US$ 9 billion in 1985. Costs vary enormously in the USA according to type of institution and level of course. In 1985/86 average costs ranged from $3,000 to $15,000 a year, which would mean $12,000 to $60,000 in total for a 4 year degree course. The borrowing limits of GSLP and PLUS loans are set as follows:

Students cannot borrow more than the total cost of education at their particular institution, defined as 'uition fees plus 'reasonable' living expenses, books, equipment and travel. Undergraduates cannot borrow more than $2,500 a year and $12,500 in total. Graduate students cannot borrow more than $5,000 a year and $25,000 in total.

A recent survey of students in California, by Hansen and Rhodes (1986) showed that 59% of final-year undergraduates had incurred debts. The average debt was $4,900, but 10% of students had debts of $10,000 or more. In general, in the USA, graduates with the biggest debts - such as doctors and lawyers - can look forward to higher than average incomes. Based on an average graduate income of $20,000 the borrowing limits set by the GSLP would mean that just over 9% of a graduate's income would have to be devoted to loan repayments, and recent research showed that approximately 90% of GSL borrowers had to spend less than 10% of their gross income on loan repayments.

The results of the California survey suggest that if loan repayments of 10% are regarded as a reasonable level of debt, then only 9% of all GSLP borrowers have excessive debts.

consumer durables banks are often willing to lend up to 30% of gross income, and for loans for house purchase considerably more than this. But student loans generally have much longer repayment periods than consumer loans and are regarded as much more risky than loans for house purchase, where the bank has the security of the house — which can always be sold if the borrower defaults on the loan.

In the USA, where dependence on loans has increased sharply in recent years, there has been concern about whether students are incurring excessive debts. A debt may be regarded as excessive if it will either lead to high rates of default in the future or have adverse effects on future patterns of expenditure and borrowing for other purposes, such as home ownership and consumer loans. There is no general agreement about what is 'manageable' or 'excessive' debt but recent research on debt levels in the USA suggest that repayments which require 10% of income are not regarded as excessive, and in fact 90% of GSLP borrowers need to spend less than 10% of their gross income on loan repayments (see box on page 56).

Other countries also use 10% of graduate income as a rough yardstick for determining reasonable levels of debt. For example in Hong Kong the Director of Audit estimated that under the existing scheme loan repayments require only 6 or 7% of the average starting salary of a university graduate, and suggested that the size of loans should be increased, as loan repayments of 10% of income would be perfectly reasonable (see box on p. 58).

However, alternative definitions of 'reasonable' or 'excessive' burdens of debt may be preferred, and Chapter 3 gives an example of a computer model which can be used to analyse a student's burden of debt.

8. How will Loan Repayments be Collected?

Critics of student loans frequently suggest that it will prove difficult, particularly in developing countries, to secure repayment of loans and prevent default, ie. failure to repay the loan. Certainly inadequate collection procedures have proved to be a weakness of some loan programmes, for example in Sri Lanka (see box on p. 59). But in other countries, for example Hong Kong and Japan, banks or loan agencies have proved quite successful in collecting loan repayments and maintaining low levels of default.

How Much of a Graduate's Income is Required for Loan Repayments?

In Hong Kong the Director of Audit recently calculated that at current salary scales, graduates repaying student loans would need to allocate 6 to 7 per cent of their salary for 5 years to repay their loans. When average salaries of graduates were compared with those of non-graduates, it was found that loan repayments would represent between 20 and 27% of the earnings differential of university graduates and between 13 and 42% of the earnings differential enjoyed by diploma holders from the polytechnic (see Table).

On the basis of these figures, the Director of Audit recommended that Hong Kong students should receive all their financial assistance in the form of a loan, instead of a mixture of grant-plus-loan, as at present. Until 1987, loans in Hong Kong were interest-free, so that even if all grants were converted to loans, the loan repayments would still represent only 8 to 10% of average starting salaries and 18 to 58% of differential earnings.

Percentage of Earnings which would be Required as Repayments of Full Loans

	% of Total Monthly Earnings		% of Extra Monthly Earnings	
Institution	*Existing Loan Repayments*	*Total Assistance*	*Existing Loan Repayment*	*Total Assistance*
Hong Kong Univ.	6%	8%	20%	30%
Chinese Univ.	7%	10%	27%	37%
Hong Kong Polytechnic				
Higher Diploma	7%	9%	42%	58%
Diploma	6%	8%	13%	18%

Source: Hong Kong Director of Audit 1985, p. 23

Loan Collection in Sri Lanka

In Sri Lanka, two research studies on the University Students Loan Scheme, carried out for the People's Bank (Hewagama 1978 and Hemachandra 1982) concluded that loan recovery procedures had not worked well, with the result that loan repayments represented only about 15% of the total value of loans awarded in Sri Lanka between 1964 and 1980. The main reasons for this were:

(a) "Many students who obtained loans avoid repayment even after they have obtained employment."
(b) "Inadequate attention (had been) paid by the Bank to recoveries of loans" (Hemachandra 1982, p. 4).

One reason for this lack of concern about loan repayments may be that the People's Bank which administers the loan scheme is a state-owned bank, and does not have an obligation to make a profit like a private commercial bank. Rather its role, with respect to the student loan programme, is to act as an agent for the government, and administer a government programme financed entirely from public funds.

In fact, in Sri Lanka the student loan programme has been partially replaced by a programme of scholarships financed by a National Lottery (the Mahapola Higher Education Scholarship Trust Fund). At the same time, however, the government has attempted to improve enforcement of loan repayments, and a new Higher Education Loan Act passed in 1983 requires employers to collect information from all their employees about outstanding loans, and to pass on this information to the Bank. All new employees are also required to give information about outstanding loans, and employers will be required to deduct loan repayments from their monthly salaries. The effectiveness of these measures will, of course, depend on whether the government of Sri Lanka is prepared to prosecute employers who do not comply.

Success seems to depend crucially on the attitude of banks or loan agencies. If banks can easily declare a loan to be in default and claim the full value of the loan from the government or guarantee agency, then they will have little incentive to improve loan collection procedures. This was illustrated by the American experience in the 1970's, when it was comparatively easy for banks to declare a loan to be in default whenever a borrower was slightly in arrears. This meant that some banks and institutions did not bother to maintain up-to-date records. More recently there have been vigorous efforts to improve collection procedures. State guarantee agencies now monitor loan repayments carefully; many have computerised loan records and have tried to identify institutions with poor recovery procedures. Some borrowers who defaulted on loan repayments have been prosecuted and the Internal Revenue Service, which collects and administers income taxes, has withheld income tax rebates from loan defaulters. The result is that American default rates have now fallen (see box on p. 61).

Experience in other countries also shows that default rates can be reduced and maintained at a low level. In Japan, efforts to improve collection procedures have included:

- introducing new methods of repayment, which make it simpler for borrowers to pay their regular instalments, for example by bank standing orders, direct deductions from salary by employers etc.
- asking universities to help trace missing students
- rescheduling debts for borrowers facing temporary difficulties
- sending all borrowers a newsletter with information about the loan programme and a list of defaulters.

The success of these efforts has markedly increased the rate of recovery of student loans in Japan from only about 53% in the mid-1950's to 95% in the late 1970's and 97% in 1985.

In Hong Kong also the loan programme has a good record of loan recovery. In January 1986 only 365 borrowers defaulted on their loans, out of a total of 18,600 whose loans were due for repayment. There are of course reasons why loan default may pose fewer problems in Hong Kong than in many developing countries. It is comparatively easy to keep track of borrowers in a small country, with a highly centralised government and an efficient banking system. Students and their parents are familiar with banks.

Default Rates in the USA

Critics of loans sometimes point to high default rates in the USA, and it is true that a few institutions have experienced very high rates of default. However, an analysis of default rates in the Guaranteed Student Loan Program (GSLP), which made over 20 million loans worth $35 billion between 1965 and 1982, and the National Direct Student Loan Program (NDSLP) which made 7 million loans worth $8 billion, concluded that:

(a) Taking account of the money that is eventually collected from borrowers who make late repayments, the 'net' default rates for GSLP loans were between 3.8 and 5.8%.

(b) The default rate in other federally-insured programmes, such as the Small Business Administration, appears to be no better and is sometimes worse than than for student loans.

(c) About $10 billion of the loans were in repayment status in 1983 and "the vast majority (ie. over 90%) are being repaid on a prompt and regular basis".

(d) Federal costs for default-related claims on GSL's have declined as a proportion of the total costs of GSLP. Costs associated with defaults amounted to less than 10% of total federal expenditure on the GSLP in 1981 and 1982.

Agencies have improved their loan servicing and collection procedures in recent years. State guarantee agencies have made significant strides in implementing procedures to prevent GSL defaults and to collect on defaulted loans (Hauptman 1983).

Hauptman concludes: "Although loan defaults continue to require close attention, the problem is not as disastrous as critics have claimed."

Moreover, the Government of Hong Kong has taken measures, such as circulating lists of all loan defaulters and their guarantors to immigration officials at all points of entry and exit, which would prove very difficult in large countries with high mobility and many entry and exit points. Nevertheless, the Hong Kong experience is instructive in showing that determined efforts to secure loan repayments can be successful.

It is clear that there are many factors, including deep-rooted cultural influences, as well as geographical or social factors, which may help to determine success in securing loan repayments. But experience in several countries shows that success can be achieved, and that the necessary steps for ensuring efficient collection of loan repayments include:

- Simple but effective *mechanisms* by which borrowers can make repayments: the simplest may be to use the income tax collection system, although very few countries have so far attempted this. An alternative is to ask employers to deduct loan repayments from employees' salaries. This is the method of collecting repayments in the new loan programme in China. However, it may be easier in countries where a high proportion of graduates are employed in the public sector than in countries with a substantial private sector.
- Efficient systems of *record-keeping*, by banks or loan agencies. Large scale loan programmes in several countries rely heavily on computerised records. In developing countries employers' records may be used. For example in some countries employers are required to inform the government loan agency of any employee who has an outstanding loan, and to collect loan repayments.
- Determined efforts to *pursue defaulters*, and if necessary prosecute. Some programmes incorporate *penalties* for late payment (eg. in Germany and Hong Kong where borrowers in arrears must pay interest).
- Widespread *publicity*, at the launch of the programme, to ensure that students understand and accept their obligation to repay loans.
- Possibilities for *postponement* in the case of genuine hardship. Few countries can afford the Swedish system of automatic

postponement for those on low incomes, but borrowers are more likely to accept the obligation to repay if they know that cases of genuine hardship will be considered sympathetically.

9. Will the Loan Programme Incorporate Incentives?

A number of loan programmes incorporate incentives for students. For example, in Germany, the government is anxious for students to complete their studies in the minimum time, since many students study part-time, or take time off in the middle of their degree course to work, which extends their period of study over many years. The student loan programme therefore incorporates loan forgiveness incentives, which means that students who complete their study in the minimum time, and achieve high grades, have up to 30% of their debt written off on graduation.

Similarly, in Barbados students receive 'loan-grants', and the proportion of the loan which must be repaid depends on their performance. Those who complete successfully, in the 'normal' time, have up to 20% of their loan converted to a grant. Those who achieve high grades also have part of their loan converted to a grant. In such a scheme loans are regarded as a way to increase student motivation, in addition to their function of providing financial assistance for the needy.

In the USA loan forgiveness or cancellation has been used to try to encourage graduates to enter the teaching profession. When the first loan programme was established in the late 1950's, it included loan forgiveness clauses to encourage students to become secondary school teachers, but experience showed that this had little effect on students' career choices. Instead, students who had already decided to become teachers were willing to take larger loans, in the knowledge that part of their debt would be cancelled. Nevertheless, a number of American states have recently re-established loan forgiveness provisions in their student loan programmes, in an attempt to recruit teachers of shortage subjects such as mathematics.

Cancellation of part of a graduate's debt if he or she works in a particular shortage occupation is an alternative option to the 'bonded scholarships' which are offered in some countries to attract teachers or other public servants. Several countries offer bonded scholarships which must be repaid if a graduate does not

enter or remain in the particular occupation for which he or she was trained. Enforcement of this may, in some cases, be just as difficult as enforcement of loan repayment. One problem with bonded scholarships is that they quickly create the expectation that students will be guaranteed employment after graduation. Such an expectation may be realistic when a programme is first introduced at a time of manpower shortage, but difficult to change when labour market conditions change and shortages are transformed to surpluses. For example, in Egypt a guaranteed employment scheme for graduates was introduced on an experimental basis in 1963, and made permanant in 1973. Critics argue that this system in Egypt is responsible for excess demand for higher education and inefficiencies in the labour market, particularly in the public sector.

This illustrates the danger that a system of incentives, introduced at a time of labour shortage, may in time give rise to the opposite phenomenon of a labour surplus. Any system of employment incentives introduced into a loan programme should be sufficiently flexible to ensure that it can be withdrawn when labour market conditions change. In addition, any system of incentives must be evaluated by means of:

* careful monitoring, to compare students with loans and those without, in order to assess the effectiveness of loan forgiveness clauses.
* careful comparison of loan forgiveness clauses with alternative options, for example direct increases in salaries of graduates in shortage occupations, to compare their cost-effectiveness.

10. How Flexible will the Loan Programme be?

Given the large number of variables in a student loan programme, it is clear that loans are potentially a very flexible instrument. This flexibility shows itself in two ways:

* There are a large number of different types of student loan, with different repayment terms, and different combinations of loan and grant, so that the planner can choose between a wide range of alternatives.

* Loan programmes can incorporate flexibility into their design, for example in providing variable repayment terms for different categories of student, different interest rates for students from different income groups (as in the USA), loan forgiveness clauses for students who meet certain conditions (as in Barbados or West Germany) or automatic postponement or repayments for students with low incomes (as in Sweden).

In designing a student loan programme the planner can take advantage of the potential flexibility of this form of finance, in choosing between alternative options, for example between a pure loan scheme or a loan-plus-grant, or between subsidised or unsubsidised loans.

In addition the policy-maker must decide how much flexibility to incorporate into the design. Many programmes offer flexibility of repayment terms for particular categories of student, e.g.:

* married women, who may be allowed to postpone repayment while they are looking after children.
* students who study abroad and thus incur large debts, who may be allowed a longer period of repayment.

However some loan programmes are designed to be even more flexible. For example, the idea of a 'loan-grant', as it has been developed in Barbados, deliberately sets out to maximise flexibility, and uses variations in the proportion of loan that must be repaid as a policy instrument, to reward those who achieve high marks or who enter particular occupations. Another example is the loan-bursary scheme in Lesotho, the main objective of which is to provide skilled manpower for the economy, particularly for the public sector. This is reflected in the loan repayment terms (see box on p. 66). If the borrower works in Lesotho for a minimum of five years after graduation, then 50% of the loan is transformed into a bursary; if the graduate works in the private sector, then a higher proportion of the loan (65%) must be repaid, and those who choose not to work in Lesotho are expected to repay all their loan.

However attempts to incorporate flexibility in this way raise a number of questions:

Loan Bursary Agreement of the Government of Lesotho

WHEREAS the Borrower has requested the Government to assist in financing the entire training of the Borrower by granting a loan to him in the amount specified hereunder:

AND WHEREAS the course of training of the Borrower in justified from the standpoint of the priorities reflected in the national development plans of Lesotho.

AND WHEREAS the Government has agreed, on the basis, interalia, of the foregoing, to grant a loan to the Borrower in the amount of .....

NOW THEREFORE, the two parties hereby do agree as follows:

1. The Borrower undertakes:—
   (a) to serve the country after the completion of his course of study for a minimum of 5 years;
   (b) where studies are undertaken abroad, to return to Lesotho immediately on completion of the authorised course of training or to pay 100% of the loan forthwith;
   (c) not to change his course of study without the written consent of the National Manpower Development Council on behalf of the Government. Any application to change the course of study shall only be considered by the said Council subject to a written recommendation of the Tutor or Head of Department of the institution concerned;
   (d) to attend, during the course of his training, all lectures, tutorials, field work, practical work and all other training required for his course and to successfully complete each study year. A student will be excused from this condition only on production of medical certificate stating that the disease was the cause of failure;
   (e) not to commit a criminal offence.
   (f) not to use habit-forming drugs whatsoever;
   (g) not to be found drunk.
2. The Government undertakes: -
   (a) to pay the travelling expenses of the Borrower to and from the location of training if such training is undertaken outside Lesotho.
   (b) to pay the living allowance and residential expenses of the Borrower, provided such costs do not exceed the normal student rate applicable to the specific educational institution;
   (c) to pay tuition, book allowance and any other allowances required for the course of training as spelt out in the official prospectus of the particular institution.
3. In the payment of the loan, the Borrower undertakes to repay
   (i) 100% of the loan if he decides not to work within Lesotho after the completion of the course of training;
   (ii) 65% of the loan if he decides to work in the private sector or for a para-statal organisation of which the Government has no controlling interest;
   (iii) 50% of the loan if he works in the Public Service or in Government-controlled para-statal organisation.
   (iv) For purposes of repayment of the loan by students training overseas, the loan fund to be repaid will be considered equal to the equivalent fees payable in Lesotho.
   (v) For students with a record of outstanding performance a 10% credit will be given i.e. for students in the public service or Government controlled parastatals and students in the private sector to pay 40% and 55% of the loan respectively

- How effective is the system for monitoring borrowers' future careers, and for enforcing different rates of repayment? For example, if graduates in the private sector have to repay a higher percentage of their debt, it may be more difficult to secure repayment, since it will often be more difficult to trace graduates in the private than in the public sector. Similarly, those who work abroad may be the most difficult to trace, but in Lesotho these borrowers must repay 100% of their loan. This clause may therefore be very difficult to enforce.
- What will be the cost implications of increasing flexibility? A scheme which incorporates many variables will be more difficult and costly to administer than a simpler programme.

In this, as in other policy choices, there is no 'right' answer, but experience suggests that there may be advantages in introducing a fairly simple system initially and introducing administrative complexity and flexibility in the light of experience. In Barbados, for example, the concept of a 'loan-grant' is a recent modification to an initial programme, based on loans alone.

The final choice about the extent of flexibility in a loan programme will depend on the objectives of the student aid system, and particularly on the relative priorities given to manpower objectives, cost recovery, academic incentives and rewards, and equity. Chapter 3 shows ..ow a computable model may help the planner in examining the implications of different policy choices, both for the borrower and for the lender. Finally, Chapter 4 gives some further details about how planners have resolved these policy choices in student loan programmes in both developed and developing countries.

Chapter 3:

Designing a Computer Model of a Student Loan Programme

The design of a student loan programme needs to take account of a wide range of variables. The capital required to establish a loan fund and the annual operating costs will depend on the choices made between the alternatives outlined in the previous chapter. These choices also determine the attractiveness of the loan programme to students themselves, and therefore the number of students who will be willing to borrow, which in turn determines the costs to the government of providing guarantees or interest subsidies for student loans.

Because of the number of variables involved, it is difficult and time consuming for the planner to compare the effects of alternative choices or assumptions. For example, decisions about the role of interest charged to students will determine the cost of interest subsidies and the extent to which loan repayments will finance future lending. They will also influence the number of students who are willing to borrow, and the proportion of borrowers who default on loan repayments. All these variables are inter-related. So what the planner needs is a way of examining the implications of alternative choices, from the point of view of both the lender and the borrower.

The Purpose of a Computer Model

A computer model provides a powerful tool because it allows the planner to see, very quickly, the effects of alternative choices or assumptions on the financial flows of the loan programme, as determined by:

- the number and size of loans each year
- the level of repayments
- the rate of default
- the costs of administering the loans.

These financial flows can then be evaluated from the point of view of both lender and borrower. They will show.

for the lender: What will be the costs of the programme, and what proportion of future lending can be financed from loan repayments?

for the borrower: What will be the future repayment obligations and how severe or reasonable is such a burden of debt?

Most of the existing student loan programmes were developed without the aid of computers, so that any comparison of alternative choices or assumptions was a very time consuming business. The result is that decisions have often been taken by politicians or policy makers without a full understanding of their implications for future costs.

An example is the decision in the USA to extend eligibility for Guaranteed Student Loans, under the Middle Income Student Assistance Act (MISAA) of 1978, discussed in Chapter 2. This decision caused an enormous increase in the number of borrowers under the GSLP and a rapid escalation in the cost to the Federal Government of providing interest subsidies. The outcome of this decision, in terms of the extra costs to the government, was almost certainly underestimated at the time that MISAA was enacted.

There is always the danger that the effects of a major change in policy will be underestimated, and there is no technique or computer model that can entirely guard against this danger. Where a computer model may help is in showing, very quickly, the effects of alternative assumptions and the sensitivity of the financial flows of a loan programme to changes in key variables. Thus, it provides a framework in which decisions can be taken with a greater awareness of the implications of alternative choices.

Today, the increasing availability of micro-computers and

personal computers with specially designed computer software packages, means that a computer model can be developed that will enable the policy maker to compare, very quickly, the effects of alternative choices or assumptions regarding:

A. the average period of the loan, which will be dependent on the average length of study, and whether students can borrow for the whole period of study, or only for part of their course
B. the repayment period
C. the grace period during which borrowers are exempt from paying interest
D. the grace period during which borrowers are exempt from repaying capital
E. the rate of interest which the borrower must pay for a student loan, i.e. the *internal* rate of interest of the loan programme
F. the rate of interest which the lender must pay for funds to finance the loan programme, i.e. the *external* rate of interest (which may be measured in terms of the market rate of interest, if loans are provided by commercial banks, or the rate of interest charged by the Central Bank, if the loans are provided by a government agency)
G. the average size of each loan
H. the rate of inflation
I. the default rate, in terms of the proportion of borrowers who delay repayments or who cannot or do not repay their loans
J. the administrative costs of setting up the loan programme
K. the annual administrative cost of running the loan programme
L. the number (or proportion) of students who will be eligible for a loan

Decisions or assumptions about these variable will determine:

* the number of loans provided each year
* the amount of loan repayments
* the costs of interest subsidies
* the cost of postponing or writing off loans that are in default

* the net cash position of the loan programme, after paying such costs and providing new loans.

The calculations will show how viable a loan programme will be from the point of view of the lender. Similarly, from the point of view of the borrower, a computer model can show the effects of decisions about how much to borrow, and the effects of different repayment terms on the future burden of debt. To estimate the burden of debt, a borrower needs to see the implications of variations in:

* the amount borrowed each year
* the rate of interest
* the grace period
* the length of repayment
* assumptions about future job and earning prospects.

A Model to Assist Student Choice

One such model that has been developed in the USA is the *Student Loan Counselor*†, developed by the Education Testing Service at Princeton. This was designed to help financial aid administrators or advisors to guide and assist students in making decisions about whether, and how much, to borrow to finance their undergraduate or graduate study. The model is designed to run on a personal computer, in the office of a university or college financial aid advisor. The *Student Loan Counselor* consists of a diskette and a user's manual which explains the nature and purpose of the model, and gives instructions for its use (see box on p. 72).

The model is 'menu driven', which means that it provides

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†*The Student Loan Counselor* is a trademark of Educational Testing Service (ETS), Princeton, New Jersey, USA, and the model is the copyright of ETS. I am grateful for permission to quote from the user's manual and to reproduce illustrations of the use of the model.

Overview of the Student Loan Counselor

The Counselor allows you to:

- *review the terms and conditions of various student loan programs, including amounts that students may borrow, interest rates, maximum length of time that students are allowed to repay various loans, information about periods of grace and deferment, and whether financial need is a consideration in establishing eligibility for each program*
- *enter basic student background information, including the student's name, dependency status as an undergraduate, present educational level, date of graduation, plans to enter the armed forces, Peace Corps, VISTA, U.S. Public Health Service or other action program following graduation, and plans (if any) to enter a health professions field*
- *enter amounts that the student has borrowed or plans to borrow from as many as five major federal student loan programs and up to two school (or other) loan programs*
- *enter estimates of starting income and income growth for use by the system in projecting the student's income during the loan repayment period.*

Once the above information is entered into the system, at the touch of a button, the Student Loan Counselor provides:

- *estimates of the amounts that the student would have to repay for individual student loan programs and the student's consolidated loan repayment obligations (annual and monthly)*
- *an overview, for each student loan program, of interest rates, payment starting and ending dates, principal amounts borrowed, interest payments, and total payments*
- *estimates, based on starting income and inflation figures that you enter, of the student's income during each repayment year in relation to the student's loan repayment obligation for that year*
- *graphs of income projections and the percentages of the student's income required each year to retire his or her loan indebtedness.*

The Student Loan Counselor is easy to operate, because it is a menu-driven system.

messages and instructions for the user on the visual display screen of the personal computer. These instructions allow the student advisor to use different menus to perform different functions:

- Compare different loan programmes
- Enter into the computer information about the student's background, such as family income level, and educational and career plans, in order to establish eligibility for different loan programmes
- Enter information about the amount of money the student wishes to borrow
- Calculate future loan repayments
- Estimate future income, as determined by the student's choice of career, information about average starting salaries and assumptions about future inflation and income growth
- Estimate the burden of debt, in terms of the proportion of future income that will be needed to repay the student loan.

The use of the *Student Loan Counselor* can be illustrated by two hypothetical examples. In the first case, the financial aid administrator is advising a student, Mary Smith, who wants to finance her undergraduate study in the USA by means of a Guaranteed Student Loan (GSL). First, the adviser must decide whether the student is eligible for the GSLP and must explain to Mary Smith the terms of the loan program, which are summarised on the computer screen as shown in the box on page 74.

Having established that Mary Smith is eligible, and wishes to borrow $2,500 a year for four years, the adviser can use the model to calculate her future loan repayments, having first entered into the computer information about:

- the year in which she will graduate
- whether or not she intends to enter the armed services, Peace Corps, etc (which determines whether loan repayments can be deferred).

Guaranteed Student Loan (GSL) Program.

Interest Rate.....7, 8, 9%	Student must be Enrolled at least.... .....half time
Repayments Start...after you leave school	Citizenship ..... U.S.
Loan Maximums (per year)	Origination Fee.....5% of principal
—Undergraduates .. $2,500	
—Grad/Prof Students..... $5,000	Grace Period.....6 months
In Total	Deferment-Max. Time..††see note
—Undergraduates . $12,500	
—Grad/Prof Students.....†$25,000	Based on Need?.....yes, if income > $30,000

† including undergraduate GSL borrowings
†† 3 yrs. for armed forces, Peace Corps, VISTA, etc.
†† 2 yrs. for residency training

The next step is to estimate the burden of debt, in the light of Mary Smith's career plans. Her future job prospects, together with the future rate of inflation and rate of growth of incomes in the economy as a whole, will determine how much of her annual income will be needed for loan repayments. The computer model helps the student to make realistic assumptions. Built into the model is a body of data on average starting salaries in the USA in a wide range of occupations. The system also suggests alternative assumptions about future inflation and income growth. The student may be an optimist or a pessimist, which will influence her assumptions about her future career prospects. The model allows Mary Smith to estimate her future burden of debt on the basis of different assumptions about starting salary and about inflation and income growth.

Mary Smith, or her adviser, feeds these assumptions into the computer, which calculates future loan repayments as a proportion

of her income. The result can be shown on the computer screen, in terms of:

(a) a table showing annual and monthly income and loan repayments as a proportion of income (below).

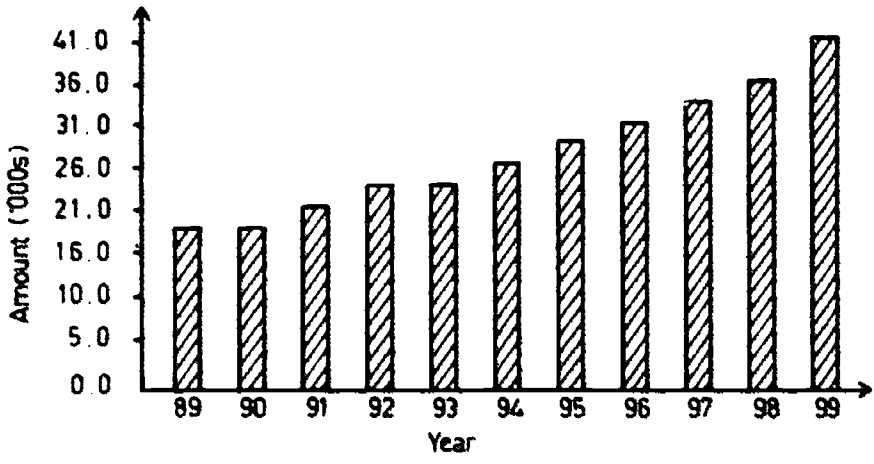
Loan Burden Analysis for: Mary Smith

Year	Annual Income	Monthly Income	Repay/ Month	Payments as % of Income
1989	18900	1575	127	8.043
1990	20440	1703	127	7.437
1991	22106	1842	127	6.876
1992	23908	1992	127	6.358
1993	25856	2155	127	5.879
1994	27964	2330	127	5.436
1995	30243	2520	127	5.026
1996	32707	2726	127	4.648
1997	35373	2948	127	4.297
1998	38256	3188	127	3.973
1999	41374	3448	127	3.674

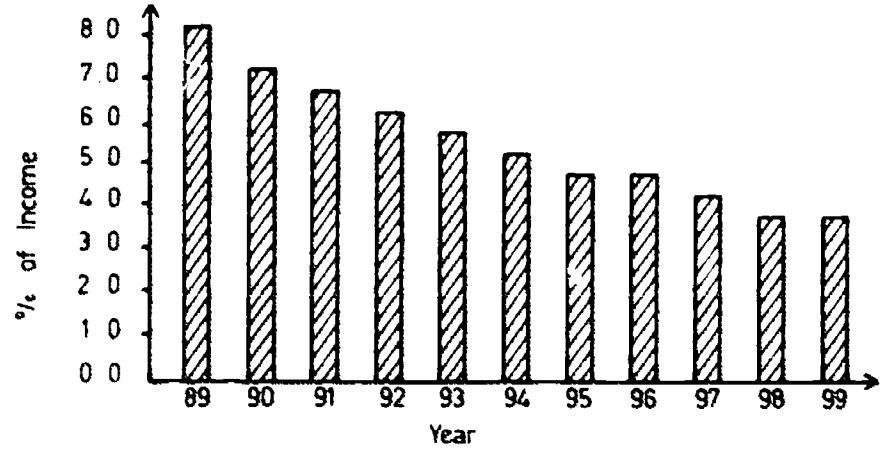
Starting Income = $18000 in 1988 Dollars.
Inflation = 5%. Income Growth Rate = 3.00%

(b) a graph showing estimated gross income profile and loan burden as a proportion of income (see p. 76).

In this example, Mary Smith plans to take a GSL and borrow $2,500 a year for four years of undergraduate study. She hopes to be earning $18,900 in 1989, when she first begins to repay the loan, and expects the future rate of inflation to be 5% and real income growth to be 3% a year. On the basis of these choices and assumptions, the computer model shows Mary Smith or her adviser that loan repayments will represent 8% of her income in 1989 and nearly 4% of her income in 1999, by which time her loan will be



Estimated Gross Income Profile for: Mary Smith



Loan Repayments as a Percentage of Income for: Mary Smith

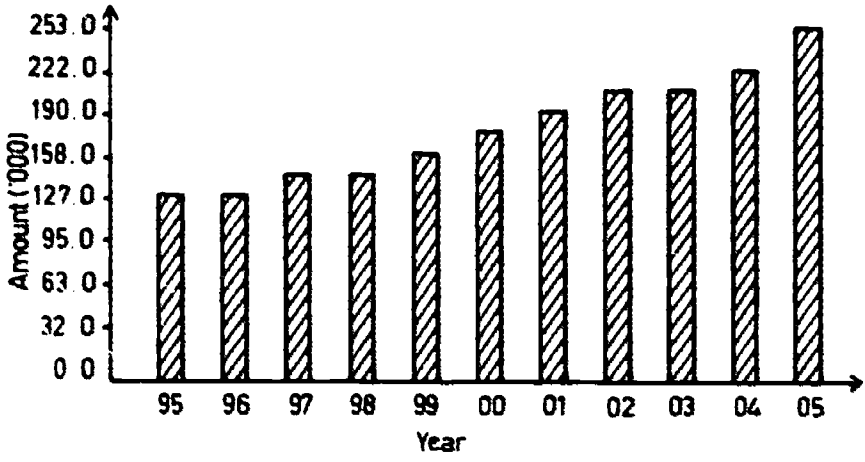
repaid in full. These assumptions may be too optimistic, but the model allows the student to see quickly the effects of a lower starting salary or higher rates of inflation.

The next example shows the choices of a graduate student, Martin Peterson, who plans to be a doctor, and who is therefore eligible for a Health Education Assistance Loan (HEAL). This allows a student to borrow much larger amounts than the GSLP, but charges the market rate of interest. Martin Peterson can use the model to help him decide whether this would be profitable, given the high income expections of American doctors.

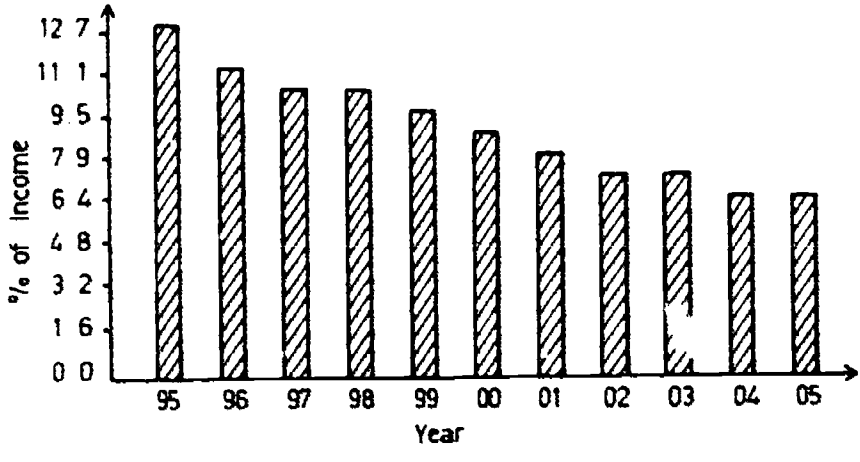
Martin Peterson estimates his starting salary, on the basis of current data on doctors' incomes, future inflation and income growth. These suggest that loan repayments for a HEAL loan will require 13% of his income in 1990, but only 6.4% by 2000 (see p. 78).

Are these assumptions realistic? The model cannot answer that question, although it does contain data on average starting salaries which serve as a guide. But the user's manual emphasises that "*The Student Loan Counselor* is intended to be used as an adjunct to the personal counselling process involving the financial aid administrator and the student borrower. It was *not* designed to replace the human interaction between counsellor and student that is so vital in assuring a clear understanding of the student's repayment obligations." In other words, the financial aid administrator must use personal experience to help the student choose realistic assumptions when using the model. The advantage of this model is that both student and adviser can then see, extremely quickly, the effects of alternative choices.

The *Student Loan Counselor* is, of course, specifically designed for use in the USA. The model incorporates data and information about the American student loan system and cannot be used, by itself, to analyse choices in a different country. However, the model does demonstrate, very powerfully, the potential uses of a computer model as a way of analysing the effects of alternative choices regarding the size of loan, interest rates and repayments terms, on the debt burden of individual student borrowers. Such a model could be developed for any other actual or hypothetical loan system, in order to:



Estimated Gross Income Profile for: Martin Peterson



Loan Repayments as a Percentage of Income for: Martin Peterson

- assist students to make decisions about borrowing
- help in the design of a loan programme by showing the effects of alternative types of loan from the point of view of the student borrower.

A Model to Assist Planning and Administration

A similar model could be developed to analyse such choices from the point of view of the lender. The remainder of this chapter provides an illustration of such a model†, which is designed to show the financial flows of a student loan programme on the basis of chosen or assumed values for the 12 variables identified and discussed earlier in this chapter (see page 70).

The model is not yet fully developed. It is based on a standard spread-sheet software package for a personal computer, and many further refinements could be included. For example, additional variables could be included, and it could be 'menu-driven', in the same way as *The Student Loan Counselor*.

At this stage, the model is intended simply for illustrative purposes, in order to show the potential uses of such a financial model as a way of assisting the planning and administration of a student loan programme by:

- analysing the effects of alternative choices or assumptions during the process of designing a loan programme
- providing a management tool during the process of administering the loan programme.

Assumptions of the Financial Model

The model uses the 12 variables (A-L) listed on page 70. These are the 'input variables' of the model, which are used to

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† The financial model has been developed with the help of John Webb and Sue Brownlow of Peat Marwick. However, the model has not been fully tested and no responsibility is accepted for its accuracy. It is here presented for illustrative purposes only.

calculate the financial flows of the student loan programme, on both an annual and cumulative basis.

For the purposes of this illustration these variables have the following values:

A. *Period of Loan* *(A = 3 years)*
Loans will be available for three years of study.

B. *Period of Repayment* *(B = 10 years)*
The loans should normally be repaid in ten years.

C. *Grace Period for Interest* *(C = 0 years)*
There will be no grace period for interest, i.e. interest will be charged during the period of study. This may not seem realistic in practice, but this assumption allows the policy maker to see, quite explicitly, the cost that is involved if this interest is foregone or deferred. Some loan programmes do charge interest during the study period (e.g. PLUS loans in the USA). Others allow borrowers to defer interest payments while they are studying, but the accumulated interest is added to the total debt on graduation (e.g. HEAL loans in the USA).

D. *Grace Period for Capital* *(D = 4 years)*
Borrowers need not repay capital during the three years of study or for one year after graduation.

E. *Internal Interest Rate* *(E = 8%)*
Borrowers pay 8% interest on their loans.

F. *External Interest Rate* *(F = 10%)*
The loan programme is financed through the Central Bank, which charges 10% interest. The loan programme therefore obtains funds at 10%, lends at 8% and bears the cost of a 2% interest subsidy.

G. *Average Size of Loan* *(G = $2,500)*
The average loan to students in year 1 is $2,500, and in subsequent years the average value of the loan increases with inflation.

H. *Rate of Inflation* *(H = 5%)*
The annual rate of inflation is assumed to be 5%.

I. *Default Rate* *(I = 20%)*
Each year 20% of borrowers are assumed to postpone or default on loan repayments.

J. *Administrative Start-Up Cost* *(J = $100,000)*
The initial cost of setting up the loan programme is assumed to be $100,000.

K. *Administrative Running Cost* *(K = 5%)*
The annual running costs are assumed to be 5% of the total value of loans awarded each year.

L. *Number Eligible to Borrow* *(L = 2,000)*
The loan programme will provide 2,000 student loans each year, but it is assumed that in the first two years, students will not take up the full number of loans, so that in year 1 of the system, the number of borrowers will be 1,000 and in year 2, it will be 1,500. By year 3, it will be 2,000.

These assumptions are summarised in the box below.

Student Loan System: Financial Model — Illustrative Version

Input Variables:

A.	*Period of Loan (Years):*	*3*
B.	*Period of Replacement (Years):*	*10*
C.	*Period of Grace on Interest (Years):*	*0*
D.	*Period of Grace on Capital (Years):*	*4*
E.	*Internal Interest Rate (%):*	*8*
F.	*External Interest Rate (%):*	*10*
G.	*Average Annual Loan size Year 1 (%):*	*2,500*
H.	*Rate of Inflation (%):*	*5*
I.	*Default Rate (% of graduates):*	*20*
J.	*Administration start-up cost ($):*	*100,000*
K.	*Administration running cost (% expenditure):*	*5*
L.	*Number eligible for loan:*	*2,000*

The Operation of the Model

On the basis of these input variables, which can be given any values to represent alternative choices or assumptions, the model uses a standard spread-sheet format to calculate the values of a number of dependent variables, for each year in the life of the student loan programme. An example showing the operation of the model is shown on pages 84–5. In this illustration, the calculations are shown for Year 1 to Year 20. The dependent variables, and the way in which they are determined, are as follows:

1. *Number of new borrowers this year*
   Determined by the input variable L.

2. *Number receiving loans*
   Shown separately for each year of operation, from starting year to current year. When the programme is fully operational,

   $$\sum_{n=1}^{n=a} (2) = (1) \times A$$

3. *Total current borrowers*
   The number of loans still outstanding, including borrowers in the grace period (3a), and those in repayment status (3b). Determined by (2) and by the length of repayment (B) and the grace period (D).

4. *Average loan size this year*
   Determined by average size of loan at the start of the programme (G), multiplied by the average rate of inflation per year (H).

5. *Total value lent this year*
   Determined by average size of loan (4) and by the number receiving loans [$\sum$ (2)] each year.

6. *Cumulative total lent*
   The sum of (5) over the total life of the loan programme.

7. *Individual debt after grace period*
   The sum of (4) during the period of loan (A).

8. *Capital repayments this year*
   Determined by (7) and (3b) and by the period of repayment (B) and the default rate (I).

9. *Cumulative capital repayments*
   The sum of (8) over the total life of the programme.

10. *Net capital position this year*
    The difference between capital repayments (8) and the amount lent each year (5).

11. *Interest payable this year on funding*
    Determined by (10) and by the external interest rate (F).

12. *Cumulative interest paid*
    The sum of (11) over the total life of the programme.

13. *Interest receivable this year*
    Determined by (5) and by the internal interest rate (E) and by the default rate (I).

14. *Net cash position this year*
    The difference between the cash inflows (8 + 13) and the cash outflows (5 + 11) each year.

15. *Cumulative net cash position*
    The sum of (14) over the life of the programme.

16. *Administrative costs*
    Determined by the cost of setting up the programme (a fixed cost, J) and the annual running costs of the programme [(5) × 5%].

17. *Overall net cash position this year*
    The net cash position (14) minus administrative costs (16).

STUDENT LOAN SYSTEM FINANCIAL MODEL – ILLUSTRATIVE VERSION

INPUT VARIABLES

A	Period of Loan (Years)	3
B	Period of Repayment (Years)	10
C	Period of Grace on Interest (Years)	0
D	Period of Grace on Capital (Years)	4
E	Internal Interest Rate (%)	8
F	External Interest Rate (%)	10
G	Average Annual Loan size Year 1 ($)	2500
H	Rate of Inflation (%)	5
I	Default Rate (% of graduates)	20
J	Administration start up cost ($)	100000
K	Administration running cost (% expenditure)	5
L	Number eligible for loan	2000

1	Number of New Borrowers This Year		1000	1500	2000	2000	2000	2000	2000	2000
		FINANCIAL YEAR	1	2	3	4	5	6	7	8
2	Number receiving loans starting year	1	1000	1000	1000	0	0	0	0	0
		2		1500	1500	1500	0	0	0	0
		3			2000	2000	2000	0	0	0
		4				2000	2000	2000	0	0
		5					2000	2000	2000	0
		6						2000	2000	2000
		7							2000	2000
		8								2000
		9								
		10								
		11								
		12								
		13								
		14								
		15								
		16								
		17								
		18								
		19								
		20								
3	Total current borrowers		1000	2500	4500	6500	8500	10500	12500	14500
	of which									
3a	Total in period of grace		1000	2500	4500	6500	7500	8000	8000	8000
3b	Total in repayment status		0	0	0	0	1000	2500	4500	6500
4	Average Loan size This Year in $		2500	2625	2756	2894	3039	3191	3350	3518
5	Total value lent this year		2500000	6562500	12403125	15917344	18212594	19144223	20101435	21106506
	of which									
5a	Value New Loans This Year		2500000	3937500	5512500	5788125	6077531	6381408	6700478	7035502
5b	as % of Total		100	60	44	36	33	33	33	33
6	Cumulative total lent		2500000	9062500	21465625	37382969	55595563	74739786	94841221	115947727
7	Individual debt after grace period		0	0	0	0	7881	8275	8689	9124
8	Capital Repayments This Year		0	0	0	0	630500	1623538	3013790	4473555
9	Cumulative Capital Repayments		0	0	0	0	630500	2254038	5267828	9741383
10	Net Capital Position This Year		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	Interest Payable This Year on Funding		250000	656250	1240313	1591734	1780209	1757369	1708764	1643295
12	Interest Paid (Cumulative)		250000	906250	2146563	3738297	5498506	7255875	8959139	10827634
13	Interest receivable this year		160000	470000	793800	1018710	1164486	1275230	1386492	1350816
14	Net Cash Position This Year		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	Net Cash Position (Cumulative)		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	Administrative costs ($)		225000	328125	670156	795867	911630	957211	1005072	1055325
16a	Set up costs		100000	0	0	0	0	0	0	0
16b	Running costs		125000	328125	620156	795867	911630	957211	1005072	1055325
17	Overall Net Cash Position This Year		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	Overall Net Cash Position (Cumulative)		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	118325431

2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
9	10	11	12	13	14	15	16	17	18	19	20
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0		0	0	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0	0	0
2000	2000	0	0	0	0	0	0	0	0	0	0
2000	2000	2000	0	0	0	0	0	0	0	0	0
	2000	2000	2000	0	0	0	0	0	0	0	0
		2000	2000	2000	0	0	0	0	0	0	0
			2000	2000	2000	0	0	0	0	0	0
				2000	2000	2000	0	0	0	0	0
					2000	2000	2000	0	0	0	0
						2000	2000	2000	0	0	0
							2000	2000	2000	0	0
								2000	2000	2000	0
									2000	2000	2000
										2000	2000
											2000
16500	18500	20500	22500	24500	26500	27500	28000	28000	28000	28000	28000
8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000	8000
8500	10500	12500	14500	16500	18500	19500	20000	20000	20000	20000	20000
3694	3878	4072	4276	4490	4714	4950	5197	5457	5730	6017	6317
22161832	23269923	24433419	25655090	26937845	28284737	29698974	31183923	32743119	34380275	36099289	37904253
7387277	7756641	8144473	8551697	8979282	9428246	9899658	10394641	10914373	11460092	12033096	12634751
33	33	33	33	33	33	33	33	33	33	33	33
138129558	161399482	185832901	211481992	238425836	266710574	296409548	327593470	360336589	394716864	430816155	468720405
9580	10059	10562	11090	11644	12226	12838	13480	14154	14861	15604	16385
6088309	7615700	9305560	11079914	12942989	14899210	16322745	17486447	18360768	19278807	20242748	21254885
15747691	23363391	32668951	43748865	56691850	71591060	87913806	105400252	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15101467	[illegible]	[illegible]
1619552	1569422	1512786	1457518	1399486	1338553	1337621	1369148	1438715	1510147	1585654	1664911
12738187	13803609	15116395	16773913	18773399	19511651	20849574	22219322	23697557	25161704	26753358	28418744
1418357	1489275	1563739	1641926	1724022	1810223	1900734	1995771	2095560	2200338	2310354	2425872
16363718	15730371	15078806	14380788	13870376	12912897	12813116	13071463	13725029	14411277	15131840	15888432
125778783	141510135	156587040	170877808	184848122	197761000	210375106	223446664	237171683	251583080	266714700	282603132
1108092	1163496	1221671	1282755	1346892	1414237	1484949	1559196	1637156	1719014	1804964	1895212
0	0	0	0	0	0	0	0	0	0	0	0
1108092	1163496	1221671	1282755	1346892	1414237	1484949	1559196	1637156	1719014	1804964	1895212
17408810	16893887	16298577	15673623	15017218	14328094	14298086	14630640	15362181	16130290	16936805	17783645
132780260	149880107	165978683	181652208	196669426	210997517	225295602	239926231	255288412	271418703	288355508	306138153

18. *Cumulative overall net cash position*
The sum of (17) over the life of the programme.

The Results of the Model

The model can be used to show what proportion of new loans each year will eventually be financed by repayments of previous loans. Because of the assumptions built into this illustrative version of the model, i.e. the fact that the internal interest rate (E) is subsidised and the default rate is 20%, this hypothetical loan programme will never become fully self-financing. By the time the loan programme is fully operational, the capital repayments each year (8) will represent 56% of the total amount lent each year (5), and the cash inflows each year (8 + 13) will represent 60% of the cash outflows each year (5 + 11). When allowance is also made for the annual cost of administering the loan programme (16b), then the model shows that the annual receipts from loan repayments (8 + 13) represent more than half (57%) of the annual expenditure of the loan programme.

The policy maker may decide that this would represent a significant saving of public funds, compared with a programme based entirely on scholarships or grants. However, the policy maker may decide to change some of the assumptions by changing the values of the input variables. The model will then show the effects of these alternative assumptions on the financial flows of the programme.

For example, the assumptions on interest rates could be modified, so that borrowers would have a grace period for interest, corresponding to the grace period for capital repayments. This would reduce the annual receipts of the programme and increase the cost of the interest subsidy. Alternative assumptions about the rate of default or the rate of inflation would also change the cash position of the programme.

Additional variables could be incorporated into the model, which would also affect the results. This version does not include any 'loan forgiveness clauses', which are a feature of several loan programmes. Other factors could also be included. It must be emphasised that this illustrative version of a financial model represents nothing more then the 'bare bones' upon which a more detailed and elaborate model could be constructed.

Conclusion: A Framework for the Analysis of Choices

The advantage of the computer models outlined in this chapter are that they provide a framework for analysing the effects of alternative choices in the design of a student loan programme. The use of a computer is not, of course, absolutely necessary. In fact, most of the existing loan programmes were designed without the aid of a computer.

The essential requirement for the design of a loan programme is not a computer but a systematic comparison of alternatives. A computer model simply provides a means to that end. Even without such a model, the planner should compare the effects of alternative interest rates or repayment periods, or the effect of alternative assumptions about the rate of default, in designing a student loan programme.

Such comparisons show that the final outcome of a student loan programme will depend on many factors. The outcome will depend partly on policy decisions such as:

* How much should students be subsidised?
* What is an acceptable burden of debt?

It will also depend on the attitudes of students, or their parents, towards borrowing which in turn will depend on:

* the private rate of return to higher education, and student perceptions of these returns
* general attitudes to credit in society.

Finally, it will depend on conditions in the country, for example:

* economic conditions, such as the rate of inflation
* the efficiency of banks or other institutions providing student loans, which will influence the rate of default and the administrative costs of the loan programme.

None of these can be predicted with certainty. International experience of student loan programmes, examined in more detail in the final section of this book, shows that there are considerable variations between countries in the input variables that influence

or determine the outcomes of a student loan programme. It also shows that planners should be aware of a number of trade-offs. For example, a low rate of interest on student loans will increase their attractiveness to students, which may increase their political acceptability, but diminish the savings that will result from the introduction of loans. Similarly, a very flexible system of loans which incorporates loan forgiveness clauses or other incentives, and variable repayment terms for different groups of borrowers, may achieve efficiency or equity objectives, but only at the cost of administrative complexity, higher administrative costs, and less saving of public funds. The choice between these alternatives therefore depends crucially on the policy objectives of the student loan programme.

Information about **The Student Loan Counselor** *can be obtained from:*

Educational Testing Service
Princeton
New Jersey 08541
USA.

If you would like further information about the computer model discussed in this chapter, please write to:

Either	*Or*
Maureen Woodhall	*John Webb*
DEAPSIE,	*Peat Marwick*
University of London	*1 Puddle Dock*
Institute of Education	*Blackfriars*
59 Gordon Square	*London EC4V 3PD.*
London WC1H ONT.	

Part II: International Experience with Student Loans

Chapter 4 Student Loan Programmes in Developed and Developing Countries

During the 1950's and 1960's student loan programme were established throughout Scandinavia and Europe, in Canada, Japan and the USA, and in a few developing countries. In Latin America, for example, the first loan programme, *Instituto Colombiano de Credito Educativo y Estudios Technicos en el Exterior* (ICETEX), was set up in Colombia in 1953.

New programmes were established in the 1970's, and by the early 1980's there were examples in at least thirty countries. A number of new loan programmes have been established in the 1980's. For example a loan programme was set up in Indonesia in 1982, and other countries have recently expanded existing schemes.

In several countries there has been a clear shift during the 1980's towards greater reliance on loans. In the USA the proportion of federal aid awarded in the form of grants increased during the 1970's until the peak year of 1975-6, when 80% of all federal aid consisted of grants. Since then grants have declined, and loans have

increased, so that by 1985 52% of all federal aid to students was in the form of loans. In other countries also, including Sweden and the Federal Republic of Germany, there is now increased reliance on loans as a form of financial aid for students in higher education.

There are several descriptions of student loan programmes in developed countries, including a comparative study of student loans in Canada, Sweden and the USA (Woodhall 1982) and a recent comparison of student aid programmes in Britain, France, Germany Sweden and the USA (Johnstone 1986).

In the USA there has been extensive research on student loans by such bodies as the American Council on Education, the College Board, and the National Association of Student Financial Aid Administrators (NASFAA). Much of this research is hardly relevant to the needs of a developing country first setting up a student loan programme. The American experience is valuable, however, in showing not only that loan programmes and a wide variety of types of loan are feasible, but also that in the USA, at least, students are perfectly willing to borrow and that reliance on loans as a way of financing both tuition fees and living costs has become widespread.

Student Loans in the USA

In 1985 more than 4 million loans were provided under a variety of programmes, and students borrowed more then US$9 billion. The average size of loan in 1985 was US$2,300 (about £1,500), but some students, particularly graduate students, borrowed considerably more then this.

The first loan programme was set up in the USA in 1958, in order to boost American science education, and it was a direct response to the launching of the Russian spacecraft or 'Sputnik'. The name of this first loan programme - the National Defense Student Loan Program (NDSLP) - emphasised its original objective: to encourage and improve science education for defence purposes. Since then the NDSLP has changed its name and been overtaken by a number of new loan programmes, sponsored or supported by the Federal Government. There is also a host of loan schemes operated by state government agencies and individual universities or colleges. The main Federal Government programmes are:

National Direct Student Loan Program (NDSLP)
The successor to the National Defense Student Loan Program. This offers highly subsidised loans to low-income students on the basis of a strict means test. When the programme was first established in 1958 the interest rate on NDSLP loans was 3%; it was raised to 4% in 1980 and 5% in 1981.

Guaranteed Student Loan Program (GSLP)
Intended for 'middle income' students, the GSLP offers subsidised loans, but at a higher rate of interest than NDSLP loans. When the GSLP was first introduced in 1965, interest was charged at 6%; the rate was increased to 7% in 1968 and 9% in 1981, but reduced to 8% in 1985.

Parent Loans for Undergraduate Students (PLUS)
PLUS loans are intended to help parents finance their children's education, or to provide additional funds for students who do not qualify for GSLP loans, in which case the loans are called Auxiliary Loans to Assist Students (ALAS). PLUS loans were first introduced in 1981, at 14% interest. The rate of interest was reduced to 12% in 1985.

Health Education Assistance Loans (HEAL)
This programme is specially designed for students training for medical and para-medical professions. Similar specialised schemes exist for certain other professions, notably law.

Apart from loans there are several other forms of student aid in the USA including federal government grants and the College Work-Study Program, which provides subsidised jobs on the college or university campus. The amount and type of aid received by individual students in the USA depends on their family circumstances and the funds available in their institution, most of which employ student financial aid administrators whose task is to measure a student's 'financial need' and assemble a student aid 'package' for each applicant. In principle, grants and NDSLP loans are intended for low-income students, and GSLP or PLUS loans for students with higher family incomes. However, individual packages vary considerably, because of the complexity of student

aid programmes in the USA. In the last decade there has been a marked shift towards greater reliance on loans. By 1985 more than half of all financial aid for students in higher education in the USA was provided in the form of loans.

Student Loans in other Developed Countries

The Federal Republic of Germany has recently replaced grants for students in higher education by a system of loans. German university students do not pay tuition fees, and students from low income families receive financial aid towards their living expenses. Financial assistance for needy students was first provided under the Federal Law for the Promotion of Education, *Bundesausbildungsforderungsgesetz* — colloquially known as BAfog — of 1971. Originally BAfog provided means-tested grants, but a loan element was introduced in the 1970's to supplement the grant, and in 1984 grants were abolished and loans became the only source of financial aid for students. The replacement of grants by loans aroused considerable controversy in Germany, but the government argued that the change was necessary in the light of increasing financial stringency. Nevertheless the loan scheme is extremely generous: graduates can repay their loans over 20 years, the loans are interest-free, and students who complete their course in a shorter than average time, or who graduate in the top 30%, have up to 25% of their debt cancelled.

In Japan, also, loans are the only form of financial aid for students. The Japan Scholarship Society was first established, in 1943, as a private foundation. Its legal status was later changed to make it a quasi-governmental organisation, and in 1953 it became the Japan Scholarship Foundation. All the 'scholarships' are in fact loans, which must be repaid. There are two types of loan. Interest free loans are provided for students in upper secondary schools and technical colleges, and loans at 3% interest are provided for undergraduate students.

In Sweden students receive a mixture of loans and grants, but the proportion of repayable loan has increased from 75% in 1965 to over 90% in 1985. Sweden is unusual in treating all students as financially independent from the age of 20. Parental income is not taken into account, and the majority of students are eligible for

loans, which must be repaid by their 50th birthdays. During the 1960's, graduates had to repay their loans in terms of constant purchasing power, and their debt was indexed in terms of the Cost of Living Index. However, this has now been changed and an annual 'adjustment index' of 4.2% is charged. All the other Scandinavian countries (i.e. Denmark, Norway and Finland) also have student loans.

Other developed countries with student loan programmes include Canada, where there is a Canada Student Loan Program, administered by commercial banks with a Federal government guarantee, and a number of provincial programmes. New Zealand is currently reviewing student aid policy and considering a loan programme, and in Britain student loans are back on the political agenda (as discussed in Chapter 1).

Student Loans in Developing Countries

Much less information is available on student loans in developing countries. A review for the World Bank of international experience with student loans (Woodhall 1983) includes information about student loans in more than fifteen countries in Latin America and the Caribbean, several countries in Asia (Pakistan and Sri Lanka), and the Middle East (Egypt and Israel). In Africa there are several small loan programmes, and proposals have been made for more extensive programmes in Kenya and Nigeria.

A short-lived experiment with loans in Ghana (described in more detail by Williams 1974) was discontinued in 1972, when a change of government led to the abolition of a loan programme introduced by the previous government in 1971. There is still a small 'Book Loan' programme in Ghana, but few attempts are made to secure repayment of these loans and many students simply regard them as grants. The experience in Ghana is sometimes quoted as evidence that student loan programmes do not work in developing countries. In fact, however, such a conclusion seems unduly pessimistic. Chapter 2 provides several instances of loan programmes in developing countries, and a number of other countries are now actively considering the introduction of loans.

The remainder of this chapter looks in more detail at three case studies:

* The *Instituto Colombiano de Credito Educativo y Estudios Technicos en el Exterior* (ICETEX) in Colombia
* The Student Revolving Loan Fund of Barbados
* The loan programme operated by the Joint Committee on Student Finance (JCSF) in Hong Kong.

Case Study: ICETEX in Colombia

ICETEX was the first student loan programme in Latin America, established in Colombia in 1953. Initially, loans were provided only for study abroad, but since 1958 loans have also been given for university study in Colombia, and the number of loans has increased rapidly since the programme was established. Between 1953 and 1984 ICETEX provided over 260,000 loans, and in 1984 it made 29,209 loans to students in Colombia and nearly 1,000 loans for study abroad (mostly in Spain, France, Mexico and the USA).

The government of Colombia plans to expand the educational credit provided by ICETEX by US$45 million, with the help of a US$20 million loan from the Inter-American Development Bank (IDB).

Administration of loans

ICETEX is an autonomous government agency, established to administer both loans and scholarships. A small number of scholarships are provided, financed through the Regional Development Budget; but the main activity of ICETEX, is educational credit, or loans.

At the moment, ICETEX offers three types of loan:

* short-term loans which must be repaid during the course of study
* medium-term loans, which are partly repaid during the course of study and partly after the studies are complete
* long-term loans, which are repaid after the student has completed a course of study.

Other loans are also available to students in Colombia, at higher rates of interest. Commercial banks make short-term loans to

students and charge interest slightly below commercial rates, and some private universities also offer loans to students to help them pay fees.

In 1985 ICETEX was servicing over 90,000 loans. It estimated that the cost of administering the loans was about US$55 per loan.

Who is eligible for loans?

Student loans are intended to help poor students to pay for university education in either public or private universities. Less than 10 per cent of all students in higher education received loans in 1985, and more than 75% of these came from low income families. Borrowers must provide a personal guarantee, from a parent or other responsible adult who is liable for the debt if the loan is not repaid.

Loan repayment terms

During the 1970's the inflation rose dramatically throughout Latin America, and though the rate of interest charged on student loans also increased it never kept pace with inflation. In 1985 the annual rate of interest on ICETEX loans was 25%, after a grace period of 6 months after graduation. The length of repayment was as follows:

(a) loans for postgraduate study in Colombia to be repaid over 4 years
(b) loans for undergraduate study in Colombia to be repaid over 5 years
(c) loans for study abroad to be repaid over 6 years.

There are no loan forgiveness provisions, and all loans must be repaid in full.

Default rates

Part of the interest charged on the loans (1% of the 25% charged in 1985) is used to pay for insurance against non-repayment of the loan in case of death or permanent disability. ICETEX finances this guarantee through the *Fondo de Garantias* (Guarantee Fund), which had assets of US$1.2 million in 1985.

High interest rates and rising levels of unemployment caused an increase in the rate of default on loans from ICETEX in the 1970's. Even so, the majority of borrowers still repay their loans. In 1985 the total value of outstanding loans was US$17.2 billion, and of this, only $2.1 billion (or 12% of the total) was in arrears.

Borrowers who are late in paying the monthly instalments on a loan are sent three reminder letters. If four instalments are in arrears, a commercial debt collection agency attempts to secure repayment. If this is unsuccessful, the borrower's employer will be asked to deduct repayments from monthly salary. Prosecution results only when all these steps have failed to secure repayment of the loan.

The results of the loan programme

ICETEX regards the loan programme as extremely successful, and it is popular with students and institutions. Research conducted by ICETEX suggests that loan recipients finish their studies in a shorter period of time than those without loans, who are more likely to interrupt their studies or take part time jobs to help finance their education, thus considerably lengthening their study period.

Research by the World Bank in the early 1970's concluded that ICETEX was not very successful in redistributing resources from rich to poor, since many loan recipients were already relatively privileged. However ICETEX now tries to concentrate loans on less wealthy students.

Case Study: the Student Revolving Loan Fund in Barbados

The Student Revolving Loan Fund (SRLF) of Barbados was established in 1976 with the help of a loan from the Inter-American Development Bank (IDB). The purpose of the Fund is to provide long-term loans for students in higher education, in order to help meet the manpower needs of the economy.

Initially, the number of loans provided by the SRLF was very small, but both the Government of Barbados and IDB regarded the first stage of the loan programme as successful, and the Fund has therefore been expanded since 1983, with the help of a further loan from IDB. The Government plans eventually to replace the entire scholarship programme by a programme of 'loan-grants' to be administered by SRLF.

Administration of the loan fund

The SRLF is a government agency located within the Ministry of Education, but operating as an autonomous agency. Its administrative structure consists of:-

(a) The *Management Committee,* which includes representatives of:
- Ministry of Education
- Ministry of Finance and Planning
- University of the West Indies
- National Training Board
- Other educational and training institutions.

Responsibilities of the Management Committee include:

- establishing terms and conditions of student loans, and
- ensuring that correct financial procedures are followed.

(b) The *Administrative Committee,* which consists of a Secretary/Accountant, Clerical Officers and Secretarial staff.

Responsibilities of the Administrative Committee include:

- publicity
- processing loan applications
- determining eligibility in accordance with regulations laid down by the Management Committee
- keeping up-to-date records of student loans
- keeping financial and other statistical data on the operation of the fund.

(c) The *Financial Agent* (the Barbados National Bank) which has responsibility for:

- drawing up contracts for loan repayments
- disbursement of loans
- collection of loan repayments

- refer all loans in arrears (more than 180 days) to the Management Committee
- carrying out internal audits.

The conditions of the IDB loan require the SRLF to carry out regular evaluations of the loan programme and to monitor this effectiveness by collecting data on:

- number of loans awarded
- the family income level of borrowers
- their educational progress
- number of drop-outs and reasons
- number of graduates, by subject
- their subsequent employment.

Initially, the Fund provided loans only for university students at the University of the West Indies or those studying abroad. The expanded programme also provides loans for students in the Polytechnic and the Teacher Training College. The loans cover both tuition fees and living expenses. The disbursement and collection of the loans is carried out by commercial banks for the SRLF.

Who receives loans?

Between 1976 and 1983, 118 students financed their university education in Barbados or abroad by means of a loan from SRLF. The majority of these were from below-average income families. Eighty percent had family incomes below US$9,000: and about a third were from families classified as having 'very low' income, on the basis of a means test administered by SRLF.

Repayment of the loans

The repayment terms for the loans depend on the level of study, the size of debt and the progress of the borrower. The length of repayment varies between 5 and 10 years, and the rate of interest between 6 and 12%. In 1982 the proportion of loans in arrears was less than 5%. On the basis of income expectations in 1983, it is thought that loan repayments will require between 5 and 10% of

graduates' annual income. A new feature of the expanded scheme is 'loan-grants'. Part of the loan can be cancelled if the borrower completes higher or vocational education successfully in the normal time, achieves satisfactory grades and subsequently works in Barbados for an agreed time.

Evaluation of the Student Revolving Loan Fund

It is too early yet to evaluate the expanded loan programme, which plans to provide more then 500 loans, but the small-scale programme which operated between 1976 and 1983 is judged to have been successful and the IDB regards the new project as a viable and potentially profitable investment. From the individual point of view, also, student loans are profitable. A tracer study of students who had received loans between 1976 and 1982 showed that after completing their studies, 87% found employment in Barbados and 65% had incomes above US$9,000. The loans therefore proved to be a profitable investment for the indivdual students, and in fact an estimate of the rate of return to education in Barbados suggests that the private rate of return to higher and vocational education is over 26%. Even after repayment of their loans therefore, borrowers will enjoy substantially higher incomes.

Case Study: The Joint Committee on Student Finance in Hong Kong

The Hong Kong Government provides both grants and loans for tertiary students. Grants cover tuition fees, union fees and faculty expenses; and loans, which are interest-free, cover the cost of living. Some extra loans are administered by individual institutions from their own funds and from charitable bequests. In addition, from 1981 to 1983 loans were provided for students studying in Britain. However, this programme has been discontinued, and this case study concentrates on the government programme of loans for students in Hong Kong, which is administered by the Joint Committee on Student Finance (JCSF).

The programme was launched in 1969, and now assists students in the two universities, the two polytechnics and the tertiary Baptist College. It aims "to ensure that no student who has been offered a

place in one of these institutions should be unable to accept it because of lack of means". The scheme now caters for about 50% of full time students. Finance is provided only for students with low incomes, and applications are checked very carefully. In 1985-86, HK$35 million (approx. US$4 million) were given out as grants, and HK$84 million (approx. US$10.5 million) as loans. Over 10,000 students received a loan in 1985–86.

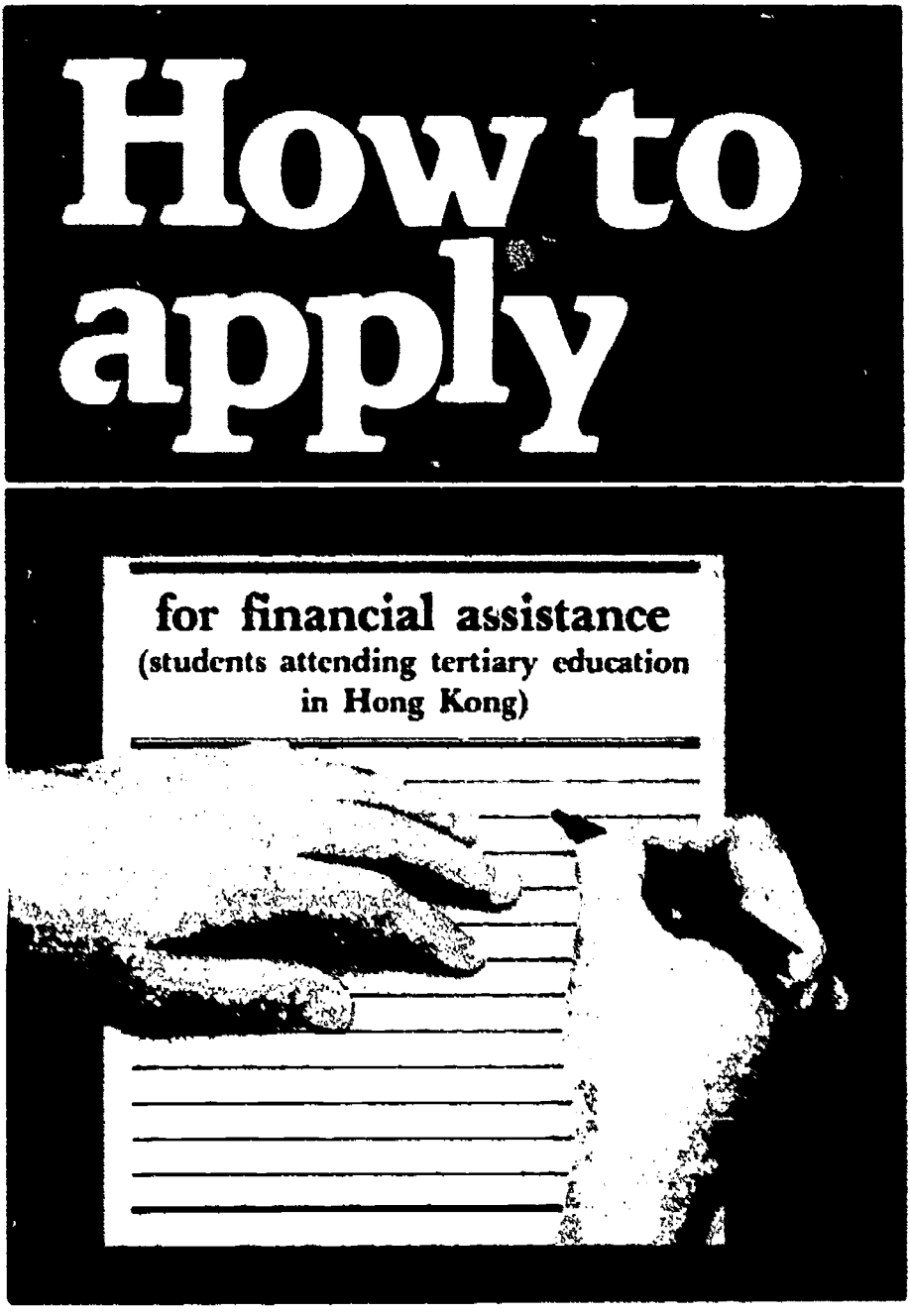
Operation of the Hong Kong system is costly. It requires a large group of administrative officers, many of whom must be highly trained. Application forms have to be processed by computer, and staff are employed to check the accuracy of applicants' statements. In some respects, the system is too complicated. However, the government feels that in general the scheme works well.

How much does it cost to run the scheme?

The JCSF employs 27 full-time staff, and during the peak season employs additional staff equivalent to 112 person-months. The annual salary bill is about HK$2.5 million, which is about 2.3% of the total amount given out as grants and loans. Additional allowance must be made for the salaries of Treasury personnel who receive repayments, and for the Student Affairs staff in the tertiary education institutions who spend a lot of time helping students to fill in forms. And one must also add the cost of buildings, computers, printing and general maintenance. Thus the total annual cost is probably about HK$4.5 million, which is about 3.9% of the total amount given out as grants and loans. This is higher than the proportion spent in Sweden, for example, where the authorities expect administration to consume only about 1.8 per cent of the budget for student aid.

The application procedure

In April each year, the JCSF advertises the scheme in the local newspapers. Most students apply through the institution where they will be studying, but new students in the two universities apply

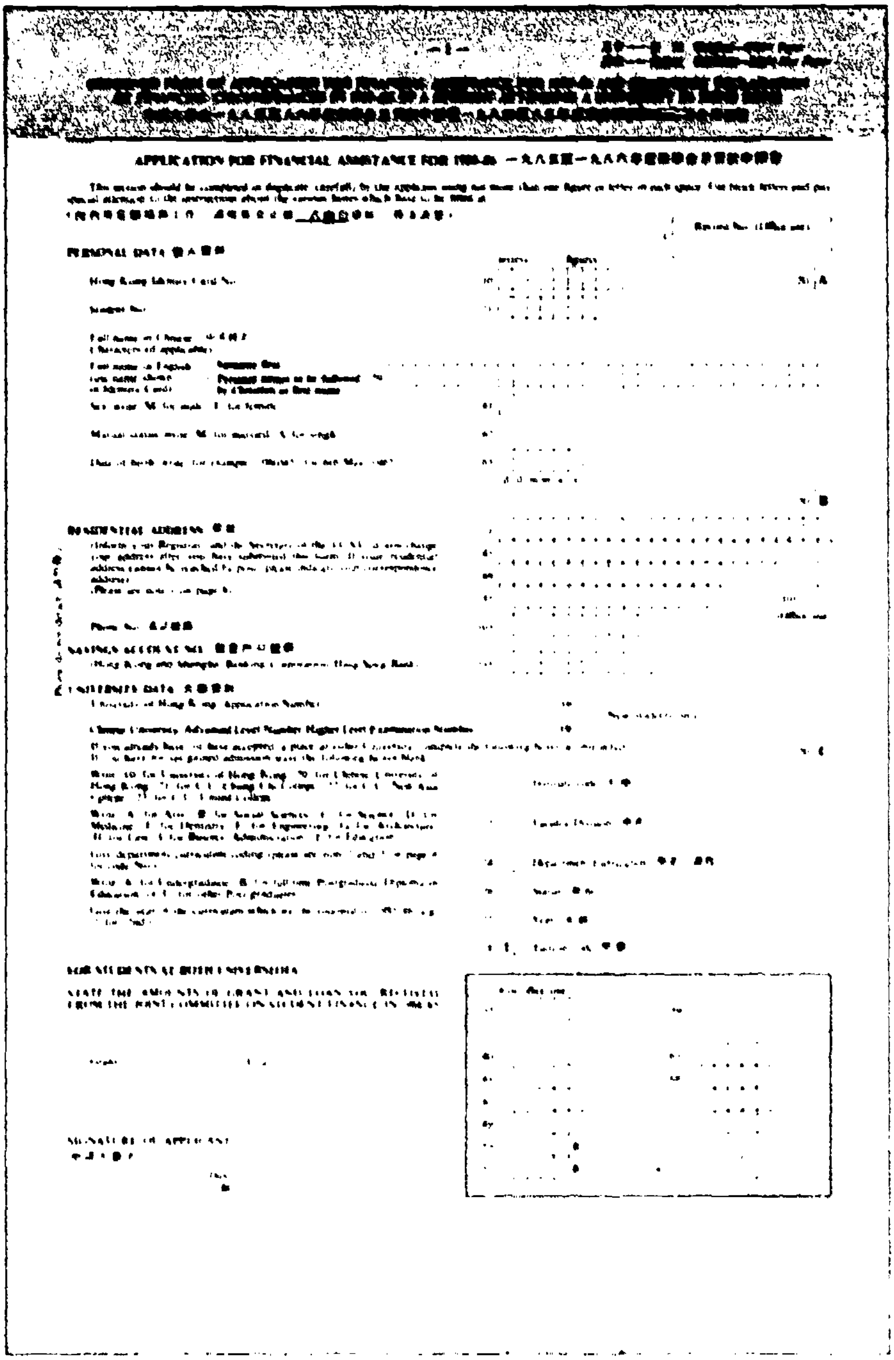


Explanation Booklet for Applic. nts, Hong Kong.

direct to the JCSF. Applications must be submitted by the end of July, and the academic year begins in September.
Each applicant must provide a lot of information:

1. She/he must fill two copies of a detailed, 10 page form. Among facts required are:
   (a) personal data: name, address, sex, date of birth, etc.,
   (b) he course to be undertaken,
   (c) details on all the people living in the applicant's household: their names, identity card numbers, occupations, employers, and incomes,
   (d) similar details on all the applicant's parents, brothers and sisters living away from the household (including those living or studying overseas),
   (e) details of all property owned by the each member of the household and by all unmarried members of the family who are resident in Hong Kong. 'Property' is defined to include buildings, businesses (whether registered or unregistered), stocks and shares, vehicles, bank deposits, jewellery, and cash in hand. The applicant must indicate the date when the property was acquired, the value of the property at that date, and an estimate of its current value.
   (f) the size and number of rooms in the residence occupied by the household, the monthly rent/mortgage, and the name, address and telephone number of the landlord/investment company,
   (g) details of all members of the household who were in full-time study during the last academic year, and
   (h) signatures of (i) all members of the household who earn money or receive pensions, and (ii) all unmarried family members who are also resident in Hong Kong and who also earn money or receive pensions. These signatures provide legal authorisation for the JCSF to investigate the truth of statements.

Because the form is both long and complicated, it is accompanied by two sets of notes, which are written in both English and Chinese.



Application Form, Hong Kong. Note the boxes for direct transfer of numbers into the computer.

Secretary, Joint Committee on Student Finance

RETURN OF EMPLOYEE'S REMUNERATION FOR THE YEAR ENDED 31ST MARCH 1985

1. Name of Employee
2. Hong Kong Identity Card Number
3. Capacity in which employed
4. Period of employment during year ended 31st March 1985
   from (I) to
5. Particulars of income accruing during the year ended 31st March 1985

Particulars	Period: Day	Month	Year	to Day	Month	Year	Amount
Salary/Wages							$
Commission/Bonus							$
Overtime Pay							$
Back Pay							$
Terminal Awards/Gratuities							$
Allowances (Meals, Traffic, Living, etc.) Nature							$
Others Nature							$
						Total	$

I certify that according to the records the above information is true and correct.

Signature of Employer

Name (in block letters)

Designation

Date

Name of Employer's Firm

Address

Employer's Official Chop

Telephone No.

Applicants for assistance in Hong Kong must declare the incomes of all their family members. If they cannot provide other types of documentation, each earner must get a form like this filled in by his employer.

2. The applicant must provide documentary evidence, such as tax returns, salary statements and profit/loss accounts for the earned income of every member of the household, and for every unmarried relative who is resident in Hong Kong, for the last financial year. If these are not available, workers must ask their employers to fill up a special form confirming their incomes in detail (see p. 104).
3. Photocopies of bank statements of all family members resident at home, and unmarried family members who are resident elsewhere in Hong Kong.
4. Photocopies of either exam results or provisional offers of admission to the tertiary institutions.
5. Photocopies of receipts of, or payments for, rent.
6. Receipts for fees paid.
7. Social welfare or medical certificates in respect of household members who are permanently sick and requiring maintenance.
8. Statements of any likely changes or additional relevant information.

Processing of applications

Checking these forms and accompanying papers is a major exercise. During the peak season, the office employs a team of temporary staff. To help with its work:

(a) the forms are colour-coded according to the type of institution in which the student will study,
(b) the form is carefully designed so that its information can be typed straight into the computer,
(c) a video-tape has been made to explain the scheme to applicants, and to tell them how to fill up the form.

Hong Kong is well known for the efficiency with which government and businesses operate, and the main decisions are taken and communicated in time for the new academic year. When the peak period of activity is over, officers check the details of applications more carefully.

How much can a student expect to receive?

When the scheme started, the amount available to individual students depended on the competition for a fixed sum of money. If

Checking of Applications in Hong Kong

Careful authentication of applications is carried out each year. A percentage of successful applications is randomly selected by the computer for verification. To ensure appropriate sampling of cases, individuals are selected by reference to institution and to annual disposable income. Officers may visit applicants' homes, grouping cases together so that more than one visit can be made on a single journey. The most common discrepancies discovered are understatement of earned income or bank deposits, and the omission of full-time employment of family members. Depending on the case, action to recover payments may be taken, and individuals may be prosecuted.

there were many needy students, each one obtained a smaller sum than if there were few. But in 1981 the government agreed to make the scheme 'open ended' so that the needs of all students could be met in full.

Students in different institutions, faculties and departments are entitled to different amounts of help according to assessments of the money they will need. It is assumed, for example, that a medical student will have higher costs than a law student. Periodic student expenditure surveys are carried out to determine appropriate amounts.

An individual's entitlement is also based on her/his annual disposable income. JCSF officers calculate the annual income of all family members, deduct needs for rent, school fees and medical expenses for the chronically sick, and divide the net result by the number of persons in the family. The figure is regarded as the student's annual disposable income, 50% of which is set against a grant requirement and 50% against a loan requirement.

Students from low-income families are protected by a cut-off point below which their annual disposable income is completely disregarded and above which it is partially disregarded according

to a 'six-band' system. In the 1985-86 academic year, annual disposable incomes were completely disregarded when they were below HK$4,200. The notional maximum grant was HK$6,200, and the maximum loan was HK$10,700.

Should Total Funds be Fixed or Unlimited?

Initially, the Hong Kong Government allocated only a fixed annual sum to the scheme. This was because it did not wish to undertake unlimited financial commitments. However, it later decided that this system prevented the scheme from meeting its objectives: in a year of heavy competition, needy students might still find themselves prevented from receiving higher education because of lack of finance. So in 1981 the system was made 'open ended'. Grants and loans still have a ceiling, and annual requirements can still be predicted fairly well. The scheme has been given an important element of flexibility.

Repayment and recovery of loans

Loans for university and Baptist College students are repayable in 20 equal quarterly instalments over five years following completion or withdrawal of studies. Different arrangements are made for polytechnic students, but those on courses lasting for more than one year also have to repay their loans within five years of completion.

Suspension of loan repayments is granted to certain applicants. People suffering from financial hardship or sickness may suspend repayments for up to six months, and individuals undertaking further study may suspend repayments for up to five years.

The number of defaulters on loans has recently been reduced to quite low levels. Some 985 default cases were outstanding in 1981-82, but they had been cut to 213 in 1985-86. These figures seem very low when it is pointed out that by 1985 over 109,000 loans had been awarded.

The number of default cases has been reduced in four main ways:

- The JCSF has conducted a persistent campaign to ensure repayments.
- When loans are given, students have to provide a guarantor. The guarantor must have a regular income and be able to supply a business address – housewives, students and pensioners are not acceptable. The guarantor signs a legal document, and can be taken to court if the loan is not repaid.
- Since 1982, any instalments which are over seven days late have had a 5% surcharge levied on them.
- The Immigration Department now includes the names of all emigrated defaulters and their guarantors in the list of wanted people which is checked at all of Hong Kong's entry and exit points.

Problems with the scheme

Although the scheme has been greatly improved since it began in 1969, it still suffers from several problems:

- Administration is costly. Hong Kong has a good supply of skilled manpower, and has a strong enough economy to be able to pay them. But other governments may not be in so fortunate a position.
- The forms are very complicated, and students often have considerable difficulty in filling them in. The tertiary institutions themselves have to help, and one institution reported that during the peak season the whole of the Student Affairs staff were completely occupied giving assistance for at least two weeks.
- Students sometimes find that their relatives are unwilling to declare their incomes or to provide the considerable paperwork that is required. This may mean that the scheme still fails to meet its objectives – that some students are still unable to take up places because of lack of finance.
- The procedures are still insufficiently flexible. It is hard for them to allow for changes in incomes. And the fact that students' forms which contain detected errors are immediately cast aside prevents the system from catering for everyone who needs it.

To improve the situation, the JCSF would like to interview all applicants. This would make the system more costly, but the Committee estimates that it would cost only an extra HK$76,000 (equivalent to the average assistance given to 4.5 students) and thus could be a good investment. About half the students were interviewed on a trial basis during 1984-85, and the authorities found it a good way both to persuade applicants to be honest and to help those in need.

Meanwhile, government efforts are supplemented by the institutions themselves. For example, staff in the Hong Kong University Student Affairs Office state that the few needy students who are not catered for by the government scheme do nevertheless receive help from separately administered university funds. Thus, they feel, it is true that no student in Hong Kong is unable to take up a tertiary place because of lack of finance.

Should the Grants be Replaced by Loans?

In 1985, the Government's Director of Audit proposed that all grants should be replaced by loans. Using civil service salaries as a yardstick, he calculated that even the extra earnings of graduates during the five years after qualification would be considerably more then the loan repayments that would be required, and therefore students would easily be able to pay. He also pointed out that the availablity of both employment opportunities and domestic help meant that female graduates need not be disadvantaged in the way that they might be in other countries; he also felt that students would be less likely to give false information when applying to an all-loan scheme, simply because they would have to pay the money back. These are powerful points, and may cause future changes.

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Student loan programmes now operate in over 30 countries, both less developed and more developed. Students borrow from government agencies or commercial banks to finance their higher education. Several developing countries are now considering introduction of student loans as a way to reduce the heavy burden of higher education on public budgets.

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- Who should be eligible for student loans?
- What should be the repayment terms?
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No single 'ideal model' is put forward, because the choice between alternative types of student loan must depend on conditions in the country. However the book contains much practical advice, and shows how a computer model can be designed to help policy-makers compare alternative loan programmes.

The Author

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